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A TREATISE ON THE DISEASES OF THE CHEST, AND ON MEDIATE AUSCULTATION.

By R. T. H. Laennec, M.D., Regius Professor of Medicine in the College of France, Clinical Professor to the Faculty of Medicine of Paris, Physician to her Royal Highness the Dutchess of Berri, &c. &c. &c. *Second Edition, greatly enlarged. Translated from the French; with Notes, and a Sketch of the Author's Life.* By John Forbes, M. D., Member of the Royal College of Physicians, and Senior Physician to the Chichester Infirmary. *With Plates.* 8vo. pp. xxviii. 722. Underwoods, London. 1827.

The title alone of the work which we have at present before us, would be of sufficient interest to excite the attention of our readers; but when we find that followed by the name of Laennec, how much that interest must increase! That many of the diseases of the chest are more obscure, more uncontrolable in their course, and fatal in their termination,—yet that their pathological characters and external signs are less understood than those of maladies of any other cavity in the body,—every practitioner who has had to deal with them will readily admit. Until the learned and persevering author of this treatise applied his attention to these affections, we were nearly as much in the dark respecting both their pathology and pathognomonic signs, especially the latter, as our brethren were two centuries ago. Indeed, we had neglected many of those wise instructions given to the world, nearly two thousand years before, by the Father of Physic, relative to the mode of distinguishing thoracic diseases by the use of the organ of hearing. That the medical world should again lose sight of such a valuable test of diagnosis, is almost impossible; yet we cannot help regretting, that practitioners in this country are so tardy in complying with the use of so easy and convenient a method. The common excuse made by medical men here for not employing the stethoscope and other means of auscultation, is that of the non-compliance of patients: but we have never met, in the course of our practice, with any individuals whom we could not persuade, by some means or other, to submit to any reasonable treatment proposed for their relief. An objection is also founded to this mode of examination, upon the plea that it occupies too much of the time of the medical attendant. It is unnecessary to make any further reply to this objection than that the duty of every one into whose hands a patient commits his health and life, requires him to use every means within his knowledge and power to relieve that patient. But we must relinquish these remarks, and apply ourselves to the contents of the valuable work before us.

The volume is divided into two grand parts. The first treats of diseases of the bronchia, lungs, and pleura; and the second embraces affections of the heart and its appendages. But before we call the attention of our readers to either of these subjects in particular, we beg leave to detain them for a short time, while we notice "the physical diagnostics of the diseases of the chest, and of the different methods of exploring that cavity." We shall pass over the mode of "manual examination of the exterior of the chest," as well as "external inspection or *mensuration*, *succussion*, and *abdominal pressure*." The last method was recommended and practised by Bichât; but our author objects to it on the score of its inefficiency as a diagnostic sign of different diseases.

When the chest of a healthy person is slightly struck, it yields, over its whole extent, a clear and distinct sound, owing to the constant presence of air in the lungs; but when any portion of this viscus is diseased in such a degree as to prevent the atmospheric air from entering, if *percussion* be applied to the thorax over that part, the sound produced is very different from that of a part situated over a healthy lung. Dr. Laennec recommends the following method of using percussion:—

"The patient ought, if practicable, to be either seated or standing; if in bed, the mattress, still more the pillows, and also thick curtains, always render the sound less. The chest ought to be covered with a thin dress, or the physician should have a glove on. This precaution, originally recommended by Avenbrugger, is particularly necessary, inasmuch as the contact of the naked hand and skin occasions a sort of clatter, which renders the pectoral sound less perfect and distinct. It is better that the chest should be covered, and the

hand naked, since the glove necessarily diminishes the sensibility of the touch; and because the sensation of elasticity perceived by the operator frequently confirms his judgment in cases where the difference of sound is only doubtful. In every case the perception of the sense of fulness or emptiness conveyed by percussion is much stronger to the operator than the mere bystander. Percussion ought to be made with the four fingers united in one line, the thumb being placed, in opposition to them, at the junction of the second and third phalanges of the index, and used merely in maintaining the fingers in close and strong apposition. We must strike with the *ends*, and not the face or pulpy portion of the fingers, not obliquely, but perpendicularly, and gently and quickly—that is, raising the hand immediately from the skin.

"When we percuss comparatively the two sides of the chest, we must be careful to strike successively on parts that are similar, with a like force, and under an equal angle; for instance, we must not strike one side in a direction parallel with the ribs, and across them on the other. The omission of these precautions frequently leads to errors of consequence. If we keep the fingers united in a bundle or mass, and not in a line, or apply them under an oblique angle, so that their face, and not their ends, come in contact with the chest; or if we use too much force, or permit the fingers to rest after the blow is struck, we elicit less sound. We ought, in general, to apply percussion to the bones, and not the intercostal spaces, and to strike the anterior and lateral parts of the chest in a direction parallel to the ribs. If, however, the intercostal spaces are not very sensible, as frequently happens in fat or phlegmatic persons, it is better to strike across the ribs. Behind, we cannot do otherwise on account of the thickness of the muscles; and here we ought to prefer the angles of the ribs, as being least covered, and therefore affording the best sound. In any point where the muscles covering the ribs are thick, flabby, or relaxed, we should endeavour to procure their tension. With this view, when we apply percussion over the pectorals, we cause the patient to keep the trunk erect, the shoulders thrown back, and the head elevated; and in applying it over the muscles at the side of the spine, or which cover the scapula, we direct the arms to be crossed, the head to be stooped, and the back to be rounded. In percussing the axilla and side, we cause the arm to be raised, and the hand to be placed above the head. If the muscles are very much relaxed, or if there is œdema or a flabby fatness, it is often useful to stretch and compress the integuments with two fingers of the left hand, and to strike in the interval. In the case of children and lean persons, it is found sufficient to percuss with the extremity of one finger. In subjects whose chest is naturally very sonorous, or where we merely wish to verify results already known and easily obtained, we may operate more expeditiously by using the flat of the hand, taking care not to apply the palm. This method, however, is less to be depended on, inasmuch as the percussion extends over too large a space, and is somewhat different under each finger. In these cases I occasionally employ, and with more success, the stethoscope, in percussing rapidly the parts on the back, especially where the muscles are flabby, and find that I can elicit in this manner a greater sound with less force of percussion."

The character of the sound derived from percussion applied to various parts of the thorax is very different. The author divides this cavity into *thirteen* regions, the sound from each of which is differently modified; but through all these we do not intend to follow him. Indeed, our readers could derive no advantage from our labour if we did; for *practice alone* will enable them to distinguish the various modifications of sound imparted by different regions.

Immediate auscultation, or the application of the ear to the walls of the chest, was recommended by Hippocrates, in order to ascertain whether any water or pus was contained in the cavity of the pleura; but those who succeeded him allowed the practice to fall into oblivion. There are many objections to this mode of examination; the greatest is—that we possess a far better method in the use of the stethoscope.

Mediate auscultation, as our readers are aware, consists in the application of one end of a cylindrical tube to the walls of the chest, to the other end of which tube the examiner applies his ear. The instrument commonly used is the stethoscope, which consists of a cylindrical piece of wood, about nine inches long, usually made in a very clumsy manner; but we had the pleasure a short time ago of seeing a very neat and ingenious stethoscope, perfectly *portable*, (which can scarcely be said of the common one,) in the possession of a gentleman who has had no small experience in the use of it. This instrument had an ivory stopper, which might be applied to the chest for the purpose of using percussion after the mode recommended by M. Piorry. According to Dr. Laennec's instructions—

"The general precautions which the practice of auscultation requires are the following:—1. The stethoscope must be applied very exactly and perpendicularly to the surface on which it rests, so as to leave no interval between the skin and any part of the extremity applied: 2. We must be careful not to produce pain by too strong pressure: this precaution is most necessary when the instrument is used without the stopper, and when the person is lean: 3. Although it is not necessary that the chest should be uncovered,—as all the positive stethoscopic signs, and frequently also the negative ones, may be perceived through clothes of considerable thickness, provided they are applied closely to the body,—still it is better that the clothing should only be light, for example a flannel waistcoat and shirt. Silks, and also woollen stuffs, are often inad-

missible, on account of the noise occasioned by their friction against the instrument. The examiner ought to be careful, above all things, not to place himself in an uncomfortable posture, nor yet to stoop too much, nor turn his head backwards by a forced extension of the neck. These positions determine the blood to the head, and thus obscure the sense of hearing: they may sometimes be properly avoided by kneeling on one knee. In examining the fore parts of the chest, we ought to place the patient on his back in a recumbent position, or in a chair, and gently reclining backwards. When we examine the back, we cause the patient to lean forwards, and to keep his arms forcibly crossed in front; and when we examine the side, we cause him to lean gently to the opposite one, and to place the fore arm on the head."

The lungs, trachea, and larger bronchial tubes, communicate, respectively, different modifications of sound. When the instrument is applied to the breast of a healthy person, a slight murmur is heard during respiration, similar to that emitted by a person in placid sleep. This sound is perceptible when the cylinder is applied to almost every part of the thorax, but especially where the lungs approach most to the parietes of the cavity. The intervention of the clothing does not alter the sound, provided that clothing be of such a nature as not to crackle, or emit a sound itself from the pressure of the instrument, which will be the case if it consist of "silk, or of fine, hard stuff." Care must also be taken that the cylinder be kept steady, otherwise the sound produced by the friction may be mistaken for, or confounded with, that of respiration. When this "respiratory murmur" can be distinctly perceived in every part of the chest, we may be sure that no obstruction exists in any part of the air passages, or any fluid in the cavities of the pleuræ; but if this peculiar sound cannot be perceived in any particular spot, it may be concluded that the corresponding portion of the lung is obstructed, from one cause or another.

The author remarks, that in "*bronchial respiration*," when the stethoscope is applied to the larynx, or cervical part of the trachea, the respiratory sound does not impart that sensation of crepitation to the ear, which it does when the instrument rests on any part of the chest. The sound is "*drier*" (rather an odd way of expressing it,) and it can be easily perceived that it passes through a large empty space.

He makes use of the term "*cavernous respiration*" to distinguish the sound produced when an excavation exists in the substance of the lungs, whether occasioned by the softening of a tubercle, by gangrene, or the bursting of an abscess. The sound in this case is somewhat similar to that emitted by the trachea. The "*blowing or puffing*," also, does not differ much from the above, only that in this variety the air appears, during inspiration, as if drawn from the auscultator's ear; whereas, during expiration, it seems as if blown into it.

The "auscultation of the *voice*" in a healthy person does not materially differ from the sensation of slight vibration felt on applying the hand to the chest; but when the lungs contain tuberculous excavations, the sound of the voice communicated by the cylinder placed over that excavation is of quite a different character. Under this circumstance, the voice appears to come directly from the chest; and it imparts the same sensation to the ear as when the instrument is applied to the larynx. Dr. L. distinguishes this modification of sound by the term *pectoriloquism*.

"This phenomenon may be produced under very different circumstances: 1, by the softening of tubercles (by far the most common cause;) 2, by the decomposition of a gangrenous eschar; 3, by an abscess, the consequence of a peripneumony; 4, by the evacuation of a cyst into the bronchia; and probably also by a fistulous communication between the bronchia and an abscess of the mediastinum."

With respect to the other varieties of auscultation of the voice, namely, *bronchophonism*, *laryngophonism*, and *ægophonism*, as described by the author, it is almost impossible to communicate proper ideas of them by words. It requires, indeed, very long experience to distinguish them, and nothing but this will enable one to do so. The auscultation of cough, also, and of the different kinds of *rattle*, of which the author mentions five varieties, can only be known from the result of practice. Some idea may be acquired, however, of the various kinds of rattle, from the terms which Dr. L. applies to them, viz. "1, the moist crepitous rattle; 2, the mucous or guggling rattle; 3, the dry sonorous rattle; 4, the dry sibilous rattle; 5, the dry crepitous rattle, with large bubbles."

We now come to the last subject noticed in the "Preliminary Essay:" this relates to that modification of sound which the author terms "*metallic tinkling*," and "which bears a striking resemblance to that emitted by a cup of metal, glass, or porcelain, when gently struck with a pin, or into which a grain of sand is dropped."

"The metallic tinckling always originates in a morbid excavation within the chest, containing partly air and partly liquid. It exists only, therefore, in two cases, viz. where a serous or purulent effusion coexists with pneumothorax; or when a large tuberculous excavation of the lung is only partly filled with very liquid pus. It is further necessary for the manifestation of this phenomenon, in cases of empyema or hydrothorax complicated with pneumothorax, that the cavity of the pleura should communicate directly with a bronchial tube by means of a fistula, such as has place when a tuberculous vomica, abscess, or eschar of the lungs, opens into the chest. This sign may, on this account, be considered as pathognomonic of this triple lesion. From it we may also further have an idea of the size of the fistulous perforation, as well as of the relative proportion of air and liquid in the chest; since

the phenomenon is more distinct, according as the fistula is larger; while the extent of the vibrations of the sound corresponds with the extent of the spaces occupied by the air."

We must next attempt to grapple with the main body of this mighty volume. We shall endeavour to go through it carefully, and present our readers with every thing we can discover in it of practical importance, but in as brief and condensed a manner as possible.

In the first *book* of the first part of the volume, the author treats of diseases of the bronchia. The first chapter of this book relates to "inflammation of the mucous membrane," or catarrh. Of this we have seven varieties described, viz. 1, the acute mucous catarrh; 2, the chronic mucous catarrh; 3, the pituitous; 4, the suffocative; 5, the dry and latent; 6, the convulsive, or hooping-cough: 7, the symptomatic. Pulmonary catarrh is so common an affection as to render it quite unnecessary for us to describe it; and the treatment employed in common cases is so simple, that we shall not notice it here. Dr. L. says, that the principal pathognomonic sign of the disease consists in a total suspension of respiration, occasionally, in the affected part. This is, of course, discovered by the stethoscope. He thinks it is occasioned by temporary obstruction of the bronchial tubes, caused by the mucus secreted from their internal surface. All that is necessary to notice respecting the pathology of these different varieties of catarrh is, that the author has convinced himself that they invariably depend upon a degree of irritation and inflammation of the mucous membrane of the bronchia. The pathognomonic signs will be according to the degree of obstruction of the air passages, and other morbid conditions of the lungs, which can only be distinguished in each from the result of practice. In the second chapter he treats of "dilatation of the bronchia." This exists sometimes in one bronchial branch; whereas, in other cases, several branches are in a dilated state. The mucous membrane is generally very much thickened in the dilated portions—its surface is uneven—it is softer than natural, and of a violet red colour. He observes, that "dilatation of the bronchia is only met with in cases of chronic mucous catarrh."

Bronchial dilatation is always attended by more or less *pectoriloquism*, "together with a *large* mucous rattle, precisely like the cavernous rattle in phthisis;" but when the dilatation is moderate and general over most parts of the lungs, a *diffused bronchophonism* takes the place of pectoriloquism. Dr. L. considers this disease as a consequence of complicated catarrhal affections; and the indication of treatment consists in diminishing the mucous secretion. The morbid appearances observable in the lungs of those who die of dilatation of the bronchia, are those which commonly follow long chronic inflammation.

We now come to consider a disease generally very fatal in its consequences, namely, the *croup*, or, as our author calls it, "*the plastic inflammation of the air passages.*" The anatomical characters of this disease are, inflammation of the air tubes, "with exudation of plastic pus (coagulable lymph,) which, becoming concrete at the very moment of its formation, lines the inner surface of this membrane to a greater or less extent." When this adventitious membrane is removed, "the subjacent tunic is of a deep vivid red colour, occasionally livid, and somewhat thickened."

The symptoms of this deadly disease are well known to practitioners generally, so that we shall not take up the time of our readers to describe them. The plan of treatment which our author recommends is that usually adopted in this country; but he appears to pursue it with far less *energy* than British practitioners are in the habit of doing.—There is one remedy, however, to which he certainly alludes, but which he appears to have had very little experience in the employment of—that is, mercury. We have had an opportunity of seeing very numerous cases of croup, and we can confidently affirm, that we have never witnessed this remedy to fail in removing the disease when employed *in the early stage of the malady, in sufficiently large doses.* Dr. L. recommends mercurial friction till salivation is produced; but it generally happens, that, in children, this object cannot be attained, nevertheless the mercury does good. It is usually employed in this country in the form of calomel, which is, in our opinion, by far the best preparation of it for inflammatory affections. In croup, it should be given in large doses, and very frequently repeated. These must, of course, be regulated in some degree by the age and strength of the patient; but as a general practice, a child of a year, or two, or three old, should take *four or five grains every hour and a half, or two hours, till the disease is somewhat subdued.* The doses may be then reduced in quantity, and given less frequently. We have here a note by the translator, who appears to place no great confidence in the mercurial plan of treatment; but we are convinced, that, if he were to pursue it with *energy*, he would find reason to change his opinion respecting this remedy. Bleeding, and other accessory remedies, are not to be neglected while the calomel is administered.

"*Bronchial hæmorrhage,*" or hæmoptysis, we shall pass over, by merely remarking, that, by the application of the stethoscope, the sound is found generally natural, with the exception of a little mucous rattle.

The other subjects treated of in this book, are, polypus of the bronchial membrane, ulcers of the bronchia, foreign bodies in the bronchia, and diseases of the bronchial glands. But as the author advances nothing new, either with respect to the diagnosis or to the treatment of these affections, it is unnecessary to take further notice of them; we shall, therefore, pass on to the second book, which embraces the diseases of the *lungs* themselves.

Hypertrophy and atrophy of these organs are by no means of common occurrence; and

as our author cuts these subjects short, we may be allowed to do the same, and call the attention of our readers for a few moments to the third chapter, on emphysema of the lungs.

Dr. L. describes *two* kinds of emphysema of the organ; 1, pulmonary emphysema; 2, interlobular emphysema. The principal anatomical characters of pulmonary emphysema, are an increased size of the vesicles, and a destruction of their uniformity. Some are so small as millet-seed, "while some attain the magnitude of hemp-seed, cherry-stones, or even French beans." At the bottom of some of the enlarged cells may now and then be found small openings, which communicate with the adjoining vesicles. Sometimes, when the cells are very much distended, their coats give way, and the air is diffused among the cellular membranes, exactly the same as in emphysema of the subcutaneous adipose membrane. In order to have a correct idea of this disease, the author recommends the affected portions of lungs to be inflated, and immediately dried; and if these be compared with sound portions, the difference is perfectly evident. The following case of partial emphysema will better illustrate the nature of the affection:—

"A woman, aged fifty, came into the hospital Necker, in December 1818, affected with great dyspnœa, cough, strong action of the heart, anasarca of the extremities, &c., which were said to have existed three weeks. She died the same night. On examination, the lungs were found free from adhesions, voluminous, and lighter than usual. A large portion of the right lung, and almost all the lower lobe of the left, were smooth and shining, yet somewhat irregular on the surface, and collapsed much less than the other parts. On the surface of these portions there was a great number of transparent vesicles, of the size of a millet or hemp-seed, and some as large as cherry-stones; the former being level with the general surface, the latter somewhat prominent. Upon inspecting these vesicles closely, they were found to be the air cells in a state of dilatation. The cells around these, and indeed over the whole of the lung that remained uncollapsed, were more distinct than is usual, and gave the parts so affected a resemblance to the vesicular lungs of cold-blooded animals. In two or three points there were bubbles of air, of the size of a small filbert, extravasated beneath the pleura. These were readily distinguished from the dilated cells, by being easily displaced by pressure. On compressing those portions of the lungs where the cells were dilated, the resistance afforded by them was softer, and the sensation communicated was unlike the natural crepitation usually perceived. The air, in escaping from these parts, produced a gentle hissing. On puncturing them they collapsed, and lost the appearance above described. In other respects, the substance of the lungs was sound. The bronchia, particularly the smaller branches in the affected parts, were very perceptibly dilated, of a very deep-red colour, and filled with a very viscid, and nearly colourless mucus."

Dr. L. further remarks, that,

"From these observations it results, that pulmonary emphysema consists essentially in the dilatation of the air cells, and that the *extravasation* of the air on the surface of the lungs, constituting the larger and more prominent vesicles, is a posterior affection, and not necessarily connected with the disease in question. The latter species of lesion is, moreover, of slight consequence compared with the dilatation of the cells, as we can hope for its removal by absorption, as in other similar cases; whilst we cannot well see in what manner either nature or art can remedy the other morbid derangement. At the same time, I do not think we are justified in considering this affection as altogether incurable. In several instances, I have fancied that I discovered the traces of cicatrization of ruptures of the pulmonary tissue, of the kind above described. In the case of subjects affected with asthma, I have several times, during the fits, detected a crepitous rattle, with large bubbles in particular points, which rattle entirely disappeared afterwards; and it is quite intelligible, that if we can diminish the intensity of the cause which keeps up the habitual distention of the cells, we may in the end hope that these will be actually lessened in volume.

The auscultatory or pathognomonic signs of this affection are rather obscure. There is a very clear sound produced by percussion, but scarcely any respiratory sound can be distinguished by means of the stethoscope. The plan of treatment which the author recommends is hardly worth mentioning. It rests entirely on general principles.

The "*interlobular emphysema*" is anatomically characterized by "infiltration of air between the lobules of the lung." The cellular partitions, instead of presenting the scarcely perceptible thinness natural to them, are found in some instances considerably thickened; "and in place of their usual whiteness and opacity, they exhibit on the surface of the lung, and toward its edges principally, trasparent bands, which form a contrast with the opaque pulmonary substance. These appearances are necessarily the consequence of rupture of some of the air vesicles in the first place; yet Dr. L. observes, that he has never been able to discover any rupture of them in examinations after death, and scarcely any dilatation of the cells is apparent. He positively affirms, that the emphysematous affection never extends to the lobules themselves. On the contrary, it seems probable, in the case of very large infiltrations, that some intermediate lobules may have been obliterated.

The chest sounds well on percussion in this disease; but our author considers one sign quite pathognomonic of it, and that is "*the dry crepitous rattle, with large bubbles;*" with the friction of *ascent* and of *descent* corresponding to the inspiratory and expiratory processes. There is generally considerable dyspnœa. The emphysema sometimes extends from the lungs

over a great part of the body, blowing up the cellular tissue under the integuments. When this is the case, it is recommended to let out the air by a few pricks with the lancet; but when the affection is confined to the lungs alone, the air is generally absorbed in time; and the author has never met a case of this kind which proved fatal.

In the next chapter we have "œdema of the lungs." The chief anatomical character of this affection consists in an infiltration of serum into the substance of the lung "in such a degree as evidently to diminish its permeability." Dr. L. believes, that it is rarely a primary or idiopathic disease, as it is generally associated with other dropsical affections. It sometimes supervenes on peripneumony. The following case will fully explain both the pathognomonic symptoms and anatomical characters of the malady:—

"A woman, aged forty, had been always, from her childhood, of delicate health, and habitually subject to great difficulty of breathing and palpitation of the heart. This state was aggravated, in her twenty-seventh year, by the supervention of general dropsy, of which, however, she was cured by diuretics: from this time her health continued still to decline. In the beginning of January, 1817, after having sat up with a sick person for several nights, her respiration became extremely difficult, especially on motion; she lost her sleep and appetite, and she had a slight cough, with mucous expectoration. In this state she came into the Necker Hospital, on the 7th March following, with œdema of the lower limbs, livid lips, extreme oppression, frequent palpitation, and startings during sleep. At this time, the chest on percussion yielded an imperfect sound on the left side before, and the right side behind, and no sound at all in the region of the heart; and in all these points the stethoscope detected no respiratory murmur. The heart yielded a distinct sound, but scarcely any impulse, when explored by the stethoscope. From these premises the diagnosis was given—*partial peripneumonia of both lungs—dilatation of the heart without hypertrophy.*

"She died on the 2d of June.

"*Dissection twenty-four hours after death.*—The brain was natural, but with a small quantity of serum in the ventricles. There was about half a pint of serum in each side of the chest, and some cellular adhesions on the right. The upper part of the right lung was sound, only injected with a colourless serum. The middle and inferior lobes were more compact, and discharged, when cut into, a great quantity of transparent, colourless serum, intermixed with a thicker, yellowish, puriform fluid. These lobes were, nevertheless, crepitous, with the exception of a few spots, of small extent, here and there, which had a density almost equal to that of liver, a yellow and somewhat reddish colour, and a granulated surface on incision. The left lung was in the same state, only without the more solid portions. Both lungs had a yellowish-gray colour, like that of this viscus when infiltrated with pus after an attack of peripneumony, only paler. Indeed, it appeared evident, that, in this case, a peripneumony of the inferior portion of both lungs had ended in suppuration, and that the greater part of the pus had been absorbed, the final restoration of the part failing through the debility of the system. The pericardium contained two ounces of serum. The heart was large, its substance soft and easily torn, and its cavities very voluminous."

Dr. L. applies the term "*pulmonary apoplexy*" to that affection of the lungs which gives rise to severe hæmoptysis. It was a disease very little known, with respect to its anatomical character, before our author's time, although its principal symptom (hæmoptysis) was easily recognized. In very severe cases, the substance of the lungs is found to have undergone great alteration. The organs become indurated in a degree equal to the most complete hepatisation; but the affection does not generally occupy a great extent of substance. The pulmonary tissue around the indurated portion is quite crepitous and healthy; but the diseased spot is of a dark red-colour, "exactly like that of a clot of venous blood. When cut into, the surface of the incisions is granulated as in a hepatised lung; but in their other characters, these two kinds of pulmonic induration are entirely different." These morbid appearances are caused by an extravasation of blood into the parenchyma, or air cells of the organ; and the author states, that the lesion "takes place most commonly in the central parts of the lower lobe of the lungs, or towards the middle or posterior part. It is, consequently, on the back and inferior part of the chest that we ought to search for it with the stethoscope."

As our readers are perfectly acquainted with the general symptoms of this malady, it is unnecessary to enumerate them here; but our author remarks, that none of these are sufficiently pathognomonic of it, inasmuch as they will not enable us to distinguish it from *bronchial* hemorrhage. The engorgement in *pulmonary* hæmoptysis is not easily recognized by percussion; but it may be readily discovered by the stethoscope, from the two following principle signs, viz.—"a want of the sound of respiration over a small circumscribed space, and a crepitous rattle round this space." When, however, the lesion is of small extent, it is very difficult to distinguish pulmonary from bronchial hemorrhage in many cases.

We cannot pass over a paragraph here without laying it before our readers, as it contains an ingenious idea, although, we believe, an erroneous one; inasmuch as the change in the condition of the vascular system after profuse hemorrhage may be accounted for upon more physiological principles.

"It appears to me impossible to witness the immense losses of blood which sometimes have place in hæmoptysis or menorrhagia; or the congestions which occur suddenly, and at the same instant, in all the internal and external organs, in epilepsy and certain cases of hyste-

ria,—without admitting that the blood in such cases experiences a sudden dilatation. We know that on mountains sufficiently elevated to occasion a considerable diminution of the atmospheric pressure, most persons spit blood; and that in severe hemorrhages, the blood is more liquid and less coagulable than natural."

Our author founds his plan of treatment upon general principles. It is perfectly similar to that generally adopted in this country for hæmoptysis.

We now arrive at a very important subject, namely, *peripneumony*. The author limits the application of this term, which he uses synonymously with *pneumonia*, to cases of inflammation of the pulmonary substance alone; and he treats of it under the following heads: "1, acute peripneumony, and its terminations by resolution and suppuration; 2, partial peripneumony, and pulmonary abscess; 3, gangrene of the lungs; 4, chronic peripneumony; and, 5, latent and symptomatic peripneumony."

The anatomical characters of acute peripneumony are, in the *first* degree, *obstructive*. The lung in this degree is externally of a livid hue, heavier, and more solid than natural. It is, however, crepitous; but when pressed with the finger, it retains the mark of the impression like an œdematous limb. In the *second* degree, we have the organ in a state of *hepatisation*. Here it has altogether lost its crepitous feel; it becomes heavier, and its substance very much resembles that of the liver. The disease in the *third* degree amounts to a *purulent infiltration*. The lung in this degree is quite as hard as in the *second;* "but it is of a yellowish-pale, or straw colour. At first, the pus, as it begins to form, appears in small detached yellow points. These points gradually combine, and the whole lung finally assumes a uniform straw, lemon, yellow colour; and when incised, exudes a yellow, opaque, viscid matter, evidently purulent, but much less offensive to the smell than the pus of an external wound."

Dr. L. considers the above species of suppuration of the lungs to be the only one of common occurrence; and that *vomicæ* are "the result of the softening of a large mass of tuberculous matter;" for among several hundred dissections, he has not met with more than five or six cases of a real abscess in an inflamed lung. "These were not of large extent, nor numerous in the same lung."

The pathognomonic sign of the first stage of pneumonia is the crepitous rattle, which is perceptible from the first onset of the inflammation. "The extent over which the stethoscope detects the rattle indicates the extent of the inflammation," which is sometimes not greater than the diameter of the cylinder. The rattle becomes "moister" as the organ approaches a state of hepatisation, till at last it ceases to be heard. When the lung has assumed the hepatised state, the rattle is no longer perceptible, and the respiratory sound is also at an end. At this stage, there is a dull sound produced by percussion over the affected part. When suppuration has taken place, more or less mucous rattle may be perceived in the bronchia, "occasioned either by the introduction of pus into them, or by a more copious secretion which then takes place." The signs of an abscess in the lung, when the pus is not absorbed or expectorated as it is formed, consists of a strong mucous or cavernous rattle. "If the abscess be near the surface, the respiration and cough yield (what the author terms) the *puffing respiration;* and, according to circumstances, the *veiled puff*." If resolution takes place before hepatisation has come on, the crepitous rattle gradually ceases, and the sound becomes daily more natural.

Dr. L. considers gangrene of the lungs a rare disease. He divides it into *uncircumscribed*, and *the circumscribed or idiopathic gangrene*. The physical signs of gangrene are the same as those of abscess of the organ, only that the crepitous rattle is not so common in the former as in the latter. The author here relates three cases of gangrene of the lungs, discovered on examination after death; but as the appearances are such as might be expected from the texture of these organs in a gangrenous state, it is unnecessary to extract any of these cases, especially as the stethoscope was not applied to the chest before death, so as to enable the medical attendant to distinguish the pathognomonic symptoms of the malady. Neither is it requisite to follow the author through the plan of treatment laid down for peripnuemony, as it consists of only a modification of that pursued by British practitioners. The only thing worthy of notice in it consists in the use of large doses of tartar emetic, which he discusses at very great length; but as he unfortunately died before his experience was sufficiently extensive to enable him to form a satisfactory opinion respecting the influence of this remedy over inflammatory affections; and as the medical men of this country have received the hint respecting this comparatively new mode of subduing inflammation, we shall now pass on to the *seventh* chapter of this book, wherein Dr. L. treats of "*tubercles in the lungs, or phthisis pulmonalis.*"

M. L. remarks, that "the progress of pathological anatomy has successfully demonstrated, that phthisis pulmonalis is owing to the development in the lungs of a particular species of *accidental production*, to which modern anatomists have restricted the name of *tubercle*." He considers this to be the only kind of phthisis that ought to be admitted, "unless it were the *phthisis nervosa*, and the chronic catarrh stimulating tuberculous phthisis."

The author considers that the matter of tubercles may be developed in the lungs under two principal forms, namely, first, under the form of insulated bodies; and, secondly, under that of interstitial injection or infiltration. Each of these presents several varieties. In the insulated, we meet with the *miliary*, the *crude*, the granular, and the encysted tumour.

The interstitial infiltration presents itself in the irregular, the gray, and the yellow characters. "Whatever be the form under which the tuberculous matter is developed, it presents, at first, the appearance of a gray, semi-transparent substance, which gradually becomes yellow, opaque, and very dense. Afterwards it softens, and gradually acquires a fluidity nearly equal to that of pus; it being then expelled through the bronchia, cavities are left, vulgarly known by the name of *ulcers of the lungs*," but which Dr. L. designates *tuberculous excavations*.

We have a very minute description of the anatomical characters of every modification of this "*accidental production*"—too minute, indeed, to be of any practical benefit to any one but the pure anatomist. The tubercles will, in fact, assume almost all manner of form; and their size, also, varies considerably, both in the lungs of different individuals, and in the same lung. It is sufficient here, therefore, merely to enumerate the principal characters of these depositions, without entering into the *minutiæ* of their various modifications. The author remarks, that the "*miliary tubercles*" constitute the most common form under which tuberculous matter appears in the lungs. The tubercles here resemble small grains; "they are of a gray colour and semi-transparent, and sometimes even transparent." The "*granular tubercles, or miliary granulations*," are of rare occurrence. They are nearly of the size of millet-seed, of an exactly round or ovoid form, and of a uniform size. They are colourless and transparent, and they are generally disseminated in countless numbers over the whole, or the greater part of the lungs, without coalescing into groups. The "*gray tuberculous infiltration*" frequently forms round tuberculous excavations; at other times it is deposited in masses of large size, which are "dense, humid, quite impermeable to air, and of a more or less deep-red colour." A "*jelly-like tuberculous infiltration*" is very frequently deposited in the spaces between the miliary tubercles. When the disease has remained a long time stationary, after an excavation has taken place in the lungs, a sort of adventitious membrane is formed round the cavity, adhering to the pulmonary tissue underneath. In different points under this membrane, patches of a grayish white colour, of a texture similar to that of cartilage, are developed. These coalesce as they grow, so as ultimately to form a complete lining to the ulcerous excavation. To this sort of deposit the author applies the term "*incysted tubercle*"—a term used before by Bayle.

The above are the most prominent characters displayed by tuberculous affections in the lungs; but the author describes numerous varieties of each kind, between some of which the shade of difference is scarcely perceptible. The form, size, and other modifications of character which they assume at different times and in different individuals, will, of course, be governed by various causes, both external and internal.

We have next an "examination of the question, whether or not tubercles are the consequence of inflammation?" After discussing very minutely the organic consequences of peripneumony (acute and chronic,) catarrh, and pleurisy, the author arrives at the following conclusion, which, we believe, is the conclusion at which every practical pathologist must arrive:—

"From all that has gone before, we are authorized to conclude, that tubercles are not the product of inflammation of any one of the constituent textures of the lungs. On the contrary, a multitude of facts prove that the development of tubercles is the result of a general condition of the body; that it takes place without previous inflammation; and that, when inflammation coincides with the tuberculous affection, it is most frequently posterior to it in its origin. To convince ourselves of the accuracy of this last proposition, we need only examine the progress of tubercles in scrofulous glands. We very frequently find these to swell, and remain for a very long time in this state, and without any redness, either of the adjoining skin, or even of the substance of the gland itself. It is frequently even several years before any marks of inflammation show themselves; but when this occurs, it seems to accelerate the softening of the tuberculous matter. Sometimes, however, not only the softening of this matter, but even the perforation of the skin, and the discharge of the pus, take place without any distinct mark of inflammation. When this occurs, it has its site evidently in the parts contiguous to the gland, and not in the gland itself. Another proof of the same fact, and one equally strong, is supplied by the existence of those secondary eruptions of tubercles, particularly such as affect the many organs at once, and which originate without any obvious sign of inflammation. In instances of this kind, it is impossible not to see a constitutional or general affection. What has just been said of inflammation, applies equally, as Bayle has well observed, to other general and local causes, to which some have attributed phthisis; such as syphilis, croup, scurvy, eruptions, &c. These may hasten the development of tubercles already existing; they may even sometimes, perhaps, determine the development of them in subjects predisposed to them; but in such cases, they are merely occasional causes; the real cause, like that of all diseases, being probably beyond our reach."

The next question is a very important one, namely, "*whether or not phthisis is curable?*" The opinion of D. L. is, we may say, perfectly original with regard to this question; but it rests upon the firmest basis, inasmuch as it is the result of the most extensive experience. Our readers must keep in mind, that the author here treats of *tubercular* phthisis, which he considers a disease perfectly distinct from that brought on the lungs in consequence of inflammation, or of pulmonary apoplexy. His views are, that pulmonary tubercles are quite incurable during the first stages of their pro-

gress towards maturity; but that when they become soft and broken down into a thin, caseous, or puriform sort of substance, they separate from their attachments to the surrounding parts, and that they are cast up during coughing in the way of expectoration. When this process has taken place, a cavity is left in the substance of the lung, which generally receives the name of ulcerated lung; but in some instances a membranous lining forms over the surface of this cavity, which gradually assumes a semi-cartilaginous consistence, and which constitutes a firm and solid wall through which the bronchial extremities open into the cell. Cavities formed in this way remain empty; and when the stethoscope is applied to the chest immediately over them, a very distinct pectoriloquism may be readily perceived. The lung is occasionally healthy and crepitous all round the lining membrane of the cell; but generally, more clusters of tubercles exist in the viscus, which run through a similar course to that of the first, and end by forming another cavern. The author relates the history of several cases, where persons lived and enjoyed perfect health for years with cells of this description in the lungs. The formation of this cartilaginous membrane constitutes the effort of nature to cure the malady; and in some instances, where only a few clusters of tubercles exist, the effort is attended with complete success. The excavation now and then degenerates to a kind of fistulous opening, which also is compatible with a curative process; for when the lung is healthy around the fistula, no inconvenience is suffered by the patient.

We have condensed, as much as we could, these interesting and important views of our author respecting the nature and anatomical characters of phthisis, and we believe we have said enough to draw the attention of our readers to these views; but we cannot afford space for any of the cases which are related in illustration of them.

With respect to the physical signs of tubercles, these are in a great measure according to the progress which the tuberculous affection has made. When the tubercles have advanced so far as to cause an obstruction to the passage of the air, the respiratory sound is lost, and percussion produces a dull, heavy sound over the part; when the tubercle has undergone the softening process, the mucous rattle is apparent in different modifications; but when the tuberculous matter has been completely discharged, the most evident pathognomonic sign is pectoriloquism.

We may now conclude the subject of phthisis without following the author through the sections wherein he speaks of the *occasional causes, symptoms and progress, and treatment* of the disease; for these subjects, although ably treated, embrace nothing with which our readers are not already acquainted. We fear that nature is the only physician by means of whose prescriptions some individuals escape the usually fatal termination of this insinuating and deceptive malady. Art may, however, contribute a little towards retarding its progress; but as we have nothing new to tell our readers upon this point, it will be our wisest plan to remain silent.

The chapters eighth, ninth, tenth, eleventh, twelfth, and thirteenth, treat respectively of "*cysts in the lungs;*" "*hydatids in the lungs;*" "*concretions in the lungs;*" "*melanosis of the lungs;*" "*medullary cancer of the lungs;*" and "*diseases of the pulmonary vessels.*" As none of these are affections of common occurrence, and as they are mostly beyond the reach of art when they do occur, we shall pass silently over them, and offer a few remarks on the subject contained in the fourteenth and last chapter of this book. This embraces the "*nervous* affections of the lungs, which the author divides into, 1. *neuralgia of the lungs;* 2. *nervous dyspnœa;* 3. *asthma, with puerile respiration;* 4. *spasmodic asthma.*

Neuralgia, or nervous pain in the lungs, is not a common affection; but our author observes, that he has seen instances of this disease where the neurilema was red and inflamed. In other instances, however, no morbid appearances were found in the nerves on dissection. For this affection, he recommends friction with corrosive sublimate, made with from four to nine grains of the mercury to half a drachm of lard.

The author's remarks on *nervous dyspnœa,* and on *asthma with puerile respiration,* are very short; and we find nothing in them likely to be interesting to our readers,—we shall, therefore, proceed to the fourth section, wherein he speaks of *spasmodic asthma*—an affection, although not remarkably fatal in its tendency, yet a very distressing one in its nature.

Dr. L.'s views of the anatomical and physiological characters of asthma, are very extensive; and they appear to us to account for the phenomena of the disease, as well as, if not better than, any we have found advanced. He considers that various morbid conditions of the lungs may dispose these organs to asthmatic paroxysms. Among these conditions are those brought on by the different species of catarrh; hydrothorax, ossification, and various other maladies, will also predispose them to asthmatic affections. But he attributes the paroxysms to spasm of the minute bronchial tubes and air cells. He lays it down as a fact, founded upon anatomical demonstration, that the bronchial ramifications at the diameter of a line are endued with a complete set of circular fibres; analogy, therefore, will lead to the inference, that these fibres continue to the very extremities of the tubes. From the fact which he further assumes, that all muscular fibres are liable to spasmodic contraction, he arrives at the conclusion, that the paroxysms are brought on in consequence of a spasm of these fibres surrounding the extreme tubes and air cells.

But he does not think it necessary that an organic disease of the lungs should exist in every instance, to account for fits of asthma; for in some cases, a spasmodic affection of the fibres, and consequently of the bronchial ramifications, takes place from purely nervous

causes, as it does in muscular fibres in other parts. More frequently, however, some organic change in the condition of the structure acts as a predisposing cause to the asthmatic paroxysms.

We will not detain the reader a moment to inquire into the propriety of the plan of treatment proposed by the author, as it is quite unsatisfactory, and far inferior to that recommended by many of our able countrymen who have written on this disease.

We now enter upon the *third* book, which is also the last of the first part of the volume. In this department of the work, the author treats of "diseases of the pleura." The first chapter treats of pleurisy.

He considers the pathology and treatment of this disease under the following heads. "1. simple acute pleurisy; 2. acute hemorrhagic pleurisy; 3. chronic pleurisy; 4. contraction of the chest, consequent to pleurisy; 5. circumscribed or partial pleurisy; 6. latent pleurisy; 7. pleuro-pneumonia; 8. empyema."

The pleura may become highly inflamed, and to a great extent, while the pulmonary tissue is not materially affected by the disease. When this occurs, it constitutes the affection which our author calls simple acute pleurisy. The inflammation gives rise in some instances to the formation of a false membrane, constituted of coagulable lymph, which glues the parietes of the chest to the pleura pulmonalis. This false membrane is at first of a yellowish-white colour, opaque, or slightly semi-transparent. When only the pleura pulmonalis, or the pleura costalis, is inflamed, this membrane embraces the whole inflamed portion without uniting it to the opposite surface. The membranous exudation often varies in thickness in different parts; and its surface now and then presents a sort of granular appearance. Inflammation of the pleura, at other times, gives rise to an effusion of *serous*, or of *sero-purulent* fluid into the cavity of the chest. The latter consists of a fluid, something resembling a mixture of pus and serum, in which large flakes of coagulable lymph may be seen floating.

In the *acute hemorrhagic pleurisy*, the effused serum is more or less tinged with blood, although generally, the quantity of blood is small. The flakes of coagulated lymph in this effusion, are neither large nor numerous; and the false membranes, if formed, are not commonly so extensive as in the simple acute pleurisy.

Of gangrene of the pleura it is hardly worth speaking, as it is a very rare disease: we shall therefore pass on to the "physical signs and symptoms of pleurisy."

As soon as effusion has taken place in the chest, the natural sound on percussion fails over the "whole space occupied by the fluid." But this is also the case in peripneumony. The patient therefore should be placed in different positions; nevertheless, as the chest is always full, and as, consequently, the fluid cannot move readily from place to place, the signs derived from percussion, in the author's opinion, are not much to be relied on. Mediate auscultation furnishes us with surer means of discrimination in this disease. It not only enables us to ascertain with precision the existence of fluid; but we may also judge of the quantity of it. "The signs by which the cylinder effects this, are, 1st, the total absence or great diminution of the respiratory sound; and, 2d, the appearance, disappearance, and return of ægophonism."

The total disappearance of the respiratory sound after the disease has lasted a few hours, is a sufficient diagnostic of effusion. In peripneumony the sound disappears much more gradually, and it is perceived unequally in different parts of the chest. The author here enters very minutely into the different modifications of the sound in the different stages of the malady; but ideas of the nice distinctions perceivable between the different varieties of sound, cannot possibly be communicated by words; and every one ought, therefore, to make himself *practically* acquainted with them.

Chronic pleurisy does not essentially differ, either in its anatomical characters or physical signs, from acute pleurisy, except in degree. It is attended with sero-purulent or with purulent effusions into the thoracic cavities, with adhesions of their walls by means of false membranes, &c., the same as the disease is found to be in its acute from. The inflammation may proceed on so as to give rise to contractions of the chest, of which affection the author relates four cases; but as these are rather long in their narration, we cannot spare room for the insertion of any of them here.

It is scarcely necessary to notice the "circumscribed or partial pleurisy," as it differs in *extent* merely from the acute or chronic. What he terms "latent pleurisy" is not a variety of pleuritis characterized by any sensible and distinct symptoms. The plan of treatment recommended for pleurisy appears judicious; but as it differs in no material respect from that employed by the practitioners of this country, it is unnecessary to waste time and occupy room (which we find already too confined) to detail it.

Pleuro-pneumonia may consist, 1st, of "pneumonia complicated with slight pleurisy; 2d, pleurisy complicated with slight pneumonia; 3d, pleuro-pneumonia, properly so called," or an inflammation of the whole, or greater part of the pleura, complicated with a severe peripneumony. The physical signs here are compounded of those of the two affections in their separate form. The treatment "must be regulated according to the predominance of either affection."

The anatomical characters of hydrothorax, the subject of the second chapter of this book, consists simply of fluid in one or both of the cavities of the pleura. The physical signs of this malady are the same as those noticed under the head of acute pleurisy with serous effusion. Other symptoms must, of course, be taken into consideration, as constituting the diagnostic of the disease. The same

may be said "of blood effused into the cavity of the pleura." This affection seldom exists, except as a consequence of some external violence, which must be taken into account with the physical signs of fluid in the thoracic cavities.

We now come to the subject of *pneumothorax*, or a collection of *air* in the cavity of the chest. The author shall speak for himself here in the narration of the following case, in which "the effusion of air was detected at its very formation, and its progressive increase followed from day to day:"—

"M. C——, a physician of the Faculty of Paris, aged thirty-six, was attacked in May 1822, with fever, diarrhœa, and colic—complaints to which he had been subject. He had twice applied leeches to the abdomen before I saw him on the 27th. I ordered them to be repeated, with the effect of relieving his pains, but not the fever. Finding that this fever was of a remitting nature, I prescribed bark in large doses, combined with tartar emetic, which cut short the periodical accessions, and left a very slight degree of fever. On the eighth day of this false convalescence, upon paying a visit to the patient (who considered himself as almost cured), I thought I observed the respiration to be quicker than usual. In consequence, I applied the stethoscope, and discovered all the signs of an acute pleurisy of the right side, viz. complete absence of respiration and resonance, and ægophonism (slight as to degree, but of a very sharp and *bleating* character) over the whole of the side, and even on the upper parts. I had never met with so extended ægophonism; and I could only account for it by considering the lung as attached to the costal pleura by ancient adhesions, in different points, so as to prevent the viscus from being separated from the walls of the chest to any great distance. This pleurisy was completely latent, as there was neither stitch nor oppression, and no more cough than that slight dry cough which attends almost all continued, and even intermittent fevers. I applied twelve leeches to the side. On the following days the ægophonism became less, and gradually disappeared over the upper half of the chest; the part where it began to be heard becoming every day lower. Percussion now yielded the natural sound over the space left by the ægophonism; but there was no respiratory sound whatever, although this was perceived, in a very slight degree, over the lower two-thirds, where the ægophonism was still strongly marked, and the sound on percussion entirely dead. It was evident from these signs, that pneumothorax had supervened to the pleuritic affusion. I did not attempt to confirm my diagnosis by means of succussion, for fear of alarming the patient. As the side was not at all dilated, and there was no metallic tinkling, I concluded that pneumothorax was not the consequence of a pulmonary fistula, but of simple exhalation into the pleura; and that the sero-purulent fluid was absorbed in proportion as the gas accumulated. This last circumstance was, moreover, quite evident from the fact, that the ægophonism and dead sound were found to retreat daily before the pneumothorax. Fifteen days from the appearance of the pleurisy, and thirty from the attack of fever, ægophonism and the sound of respiration were confined to the middle of the back. The anterior-superior half of the left side yielded on percussion a decidedly clearer sound than the other side; and on the lower parts the sound of respiration was entirely wanting. From this time the patient gradually sunk, with various symptoms, connected as well with the fever as the pneumothorax, and died on the 17th July.

"*Dissection thirty hours after death.*—Upon penetrating the left side of the chest, a large quantity of inodorous gas made its escape with a hissing sound; and upon laying open the chest, the lung was found compressed towards the mediastinum (no doubt by the air that had escaped), leaving a space between it and the costal pleura capable of containing more than a pint of liquid. The lung was attached to the pleura of the ribs by five or six points, two at its anterior border, and the other at its outer and posterior surface, in such manner that it could not be completely compressed against the mediastinum, and was not indeed, in any point, more than two inches distant from the walls of the chest. The lower and back parts of this side contained about ten ounces of a bloody serosity, and a large quantity of false membranes, of a yellow colour, pretty thick, and of a tolerably fine consistence. The remaining part of the pleura pulmonalis was healthy; and the costal pleura on its upper and lateral parts was of a dead white colour, and of a shining appearance, like that of cartilage: here and there on its surface there were some tuberosities, of the size and shape of hemp-seed, and whose texture, as well as that of the pleura itself, seemed intermediate between that of the healthy pleura and fibro-cartilage. This portion of the pleura was at least a quarter of a line thick. Upon dissecting it, some tuberculous masses, yellow and opaque, and of the size of a lentil or hemp-seed, but for the most part flattened, were found on its exterior or adherent surface, so as to give rise to elevations on its inner surface, less regular in appearance than the small tuberosities already described. The lung was compressed so as to be not larger than twice the thickness of the hand. It was of a violet hue, soft, and flabby, but otherwise healthy, and did not contain a single tubercle. The right lung was universally adherent by means of old cellular attachments; and its upper lobe contained many tubercles in every stage of their progress."

Simple pneumothorax is of rare occurrence: the disease in most instances is complicated with effusion of fluid in the thoracic cavities. The author recommends the air to be let out by a trocar; but the organic disease which gave rise to its formation is the chief subject to be attended to.

The only chapter which remains to be now

noticed, and which concludes Part First of the work before us, treats of *accidental productions in the pleura.* This chapter is divided into four sections; in the first of which are considered, 1, *productions with effusion;* 2, *solid productions;* 3, *productions on the outer surface;* and, 4, *diaphragmatic hernia.* It is unnecessary to detain our readers to take any further notice of these subjects, as they have been already described by various other authors. The remarks which Dr. L. offers upon them in the present work are short, and do not lead to any new views of practical importance.

We have now waded through, and examined, as minutely as we could, upwards of *five hundred and thirty* closely printed pages of this volume. There still remains Part Second, consisting of nearly two hunded more pages, which shall be noticed in our next number. We have not been able, for want of room, to give many extracts, as we were anxious to condense the substance of the work and the views of the author, as much as possible, and present them to our readers in as complete and perfect a state as the limits of a review would permit. If we have accomplished our intention, we are fully rewarded for our trouble.

From the London Medical and Phisical Journal.

CASE OF PERICARDITIS, *connected with Acute Rheumatism, successfully treated by* S. D. Broughton, Senior Surgeon to the St. George's and St. James's Dispensary, and Surgeon to His Majesty's second Regiment of Life Guards.

The case of which I am about to give an account, though one now well known and understood, may nevertheless be regarded as a useful addition, perhaps, to the general stock of information upon the subject to which it relates.

It will be observed that the metastasis of acute rheumatism was the obvious exciting cause of an inflammatory affection of the heart, that the alternations of the disease in the different structures which it involved were strongly marked and clearly traceable, and that the mind was affected in a singular manner during its progress.

The case terminated favourably; which, in conjunction with its unequivocal signs, I deem to be not the less interesting to the pathologist on that account.

A recruit of the Life Guards, recently from the country, aged nineteen, tall, but of rather a slender form and pallid complexion, was taken into the regimental hospital on the evening of the 3d of April, 1826. He complained of pains throughout the body, principally referred to the joints. The tongue was white, the pulse full and quick, the skin dry, and the bowels were moderately free.

I prescribed seven grains of James's powder with three of calomel; and placed him on spoon-diet, with barley-water and nitre.

April 4th.—The skin appeared moist, but the action of the pulse was little diminished.

One drachm of the vinum antimonii tart. was given in a saline draught every six hours. —The powder was repeated, and an aperient draught of salts and senna ordered in the morning.

5th.—A slight abatement of the fever seemed to have taken place, and the pains were diminished.—Pergat.

6th.—Some degree of inflammation of the pharynx.

A gargle of nitrate of potass prescribed, and the mixture repeated.—Calomel and antimony as before.

7th.—Some increase of fever, and return of pains in the joints, occurred to-day, and he was put into a hot bath. The antimonial wine excited too much nausea.

The dose was decreased, and the mixture given every four hours, with ten grains of James's powder every six.—The calomel omitted.

Soreness of the pharynx relieved.

Next day, he appeared to be much relieved, with moisture on the skin, and less fever.

9th.—He experienced great pain and tumefaction of the knee and ankle on one side, with extreme tenderness to the touch. Bowels open; tongue furred.

I ordered half a drachm of the colchicum wine to be given with each dose of the mixture, and ten grains of the compound powder of ipecacuanha, with six of James's powder, every six hours; and a fomentation of poppies to be applied to the limb.

10th.—The pain and swelling of the limb was much relieved, and now an urgent cough and fixed pain at the sternum appeared, The tongue was very dry and furred; the pulse hard, rapid, and full. A deep inspiration excited pain and coughing, indicating acute inflammatory action, probably in the pericardium. The respiration did not seem to indicate the lungs as the seat of the disorder.

Twenty-four ounces of blood were directly taken from a large orifice in the arm; the colchicum was omitted, and the antimony increased to double the former dose.—Ten grains of James's powder, with two of calomel, were given in the evening; and thirty leeches applied to the chest,—the bleeding in the morning not having removed the pain, although it had diminished the fever, and the heart being felt acting powerfully against the ribs. The blood taken in the morning was much cupped and buffy. A blister was applied to the back, between the shoulders, at night.

11th.—Some relief from the urgent symptoms of the day previous seemed to be obtained, but the action of the heart and arteries continued high and strong. The tongue was more moist, and less furred. The wrist of the left arm was swollen, red, and tender, and there was pain in the shoulder when moved. He had rather a restless night, but the skin was moist. The application of the leeches was followed by a disposition to syncope. The cough was considerably diminished, and the bowels were open. The pulse the even-

ing before was at 130, but diminished in strength. The urine was very turbid, but clear this morning; and the swelling of the limb went down after the application of poppy fomentations, but remained stiff.

Twenty drops of the tincture of digitalis were added to each dose of the mixture.

12th.—Slept well last night. Some pain in the left arm. Pulse ninety-six; tongue moist and cleaning. Very little cough, and pain of the chest much diminished. Feels weak and low.

The digitalis was increased to twenty-five drops every five hours.

To-day he was allowed a little broth, and the following draught was given to remove a retention of urine from the blister, viz. Misturæ camphor, misturæ salinæ, āā ℥j.; træ. hyoscyami ℥ss.; spirit. ætheris nitrosi ℥jss.; M. st. sum.

13th.—Passage of urine free; bowels open. The cough was nearly gone; pulse reduced to eighty-four. Slept well. Tongue moist and clean; the left arm much better; skin moist.

14th.—This morning the cough had somewhat increased, but the pulse continued at eighty-four. Complained of ardor urinæ, for which twenty drops of the liquor potassæ were given in barley-water and solution of gum arabic occasionally, together with ten grains of the compound powder of ipecacuanha every six hours.

15th.—Pulse eighty-four. The ardor urinæ relieved, and the urine, which was thick yesterday, is now clear. The bowels were open, and he was better in every respect. The digitalis omitted.

16th.—The urine was scanty and turbid; the blister healed. Pergat.

17th—. Urine clear and freer. Much debility. Pergat. The antimonial wine omitted.

19th.—Pain of the chest and cough returned; pulse rose to 120, and rather full; tongue dry.

Twenty-four ounces of blood taken from a large orifice in the arm. Diet reduced to spoon. The mixture, with one drachm of antimonial wine, repeated every four hours. The Dover's powder omitted. A large blister applied to the chest. A moderate draught of salts and senna given.

In the evening, he was very much relieved. The blood appeared much cupped and buffy.

20th.—The pulse was much reduced, and he was better, and continued so, but weak, till the 25th, when a fixed pain in the left side came on, not increased by a deep inspiration. The pulse rose to 116, but without cough.

Twenty-four leeches were applied to the side, and twenty drops of the tincture of digitalis added to each dose of the mixture. One drachm of colchicum wine was given at night.

26th.—In the evening he was much relieved, and slept during the night. The pain was removed, but was disposed to return at intervals. The pulse was quick, but diminished in strength; respired freely, and had no cough; skin moist.

The colchicum was repeated this night, and the mixture continued every six hours.

27th.—Pain returns periodically in the region of the heart; the pulse was bounding and intermittent, and the heart acted forcibly against the ribs, as if struggling in a confined space, with a sensation of fluttering in the chest. When on his back he complained of suffocation, and respired best in an upright position. Slept well last night. The tongue was moist and clean. No stool to-day.

The colchicum omitted. The mixture continued, and thirty drops of the digitalis given at each dose. An opening draught.

28th.—Last evening his pulse became reduced in strength and frequency, and he was low and restless. Pergat.

29th.—Pulse sixty, and did not intermit; urine high coloured and clear; restless. This day he appeared confused in his mind, and talked incoherently. Pergat.

30th.—The incoherency continued, and *he repeated the last word of every question and remark made to him.* The extreme fulness and force of the heart's action somewhat lessened. The mixture repeated, and the blister renewed between the shoulders.

May 1st.—He appeared to have recovered his self-possession, and to have nearly left off repeating the last word addressed to him. Slept better last night, and was more composed. He respired easily: the pulse was less full; the heart beat less forcibly; but the artery pulsated irregularly. Tongue moist and clean, and bowels open.

During the few following days, he appeared to improve, but rambled a little, and sometimes the repetition of the last word was observable, and his spirits appeared low. The pulse was reduced to fifty-six, and the heart's action diminished. The artery at the wrist intermitted in its beats. Latterly his mind seemed less affected. On the 4th, the digitalis and antimonial medicine was omitted, and a draught of infusion of roses, with Epsom salts, given thrice a day; and his diet was rendered more generous, in a small degree.

9th.—The intermission of the pulse continued, but less so, and he seemed to complain only of debility, with less restlessness and mental affection.

19th.—Has sat up every day, and, when upright, the pulse beat steady and at 100, but not strong or full. Night sweats have come on, but he has slept well, without pain or cough. The heart's action continued quick and forcible. Since the 16th, he had taken a grain of digitalis with three of the pil. hydr. twice a day, and yesterday the digitalis was increased to a grain and a half. The following pills were now prescribed—

Digitalis gr. v.; hydr. subm. gr. v.; extracti conii ℥j. M. fiat pil. xv. quarum sumatr; ter in die.

An ointment of one drachm of tartarised antimony, rubbed up with an ounce of the

ung. cetacei was applied every night to the chest, till the pustules produced rendered its omission necessary.

He continued to gather strength, and the pulse became slow, natural, and equable; and on the 24th of June he left the hospital, and returned to his duty, having been under treatment since the 3d of April.

He has since continued perfectly well, and has never relaxed from his duties a single day. On examining him recently, I found the heart seemed to labour against the ribs: but his health was excellent, and his constitution in good condition, his conduct being steady, sober, and quiet.

From the London Medical and Physical Journal.

ANEURISMAL TUMOUR, *situated between the Brain and Sella Turcica.* By Thomas William Chevalier, Consulting Surgeon to the Royal Union Association, and Surgeon to the Westminster General Dispensary.

S. B. ætat. thirty-nine, a woman of masculine form and robust constitution, applied to me on the 8th of October, when I obtained the following history of her case from herself and her mother.—She had suffered from a severe burn at the age of fourteen, and had ever since complained of an unusual sensation, which she described as "a shaking movement in her inside." She had been more or less subject to headach from her infancy, and finally ceased to menstruate seven years since, without experiencing any inconvenience.

She had always been fond of reading, and indulged much in that amusement. Her circumstances obliged her to lead an extremely temperate and laborious life; to which, however, she was cheerfully inclined.

About the month of May last, she first began to be afflicted with a strange sort of headach, very different from that to which she was previously accustomed, and a sensation of burning heat in the stomach, feeling (to use her own expression,) "as if her inside were on fire," and she frequently complained of the excessive heat of her mouth.

These headachs, which were very severe, usually occurred more than once a week, and lasted, if at night, during two or three hours, but, in the day time, usually for half an hour.

They were always preceded by flushing of the countenance, and an increased sensation of heat, particularly in the region of the stomach, without any shivering or perspirations. They invariably commenced at the back of the head, the pain shooting through to the right eye, and generally producing œdema of the palpebræ. They were always relieved by the application of cold to the head, and they would at any time recur if she attempted to sit by the fire, or even to expose herself to the heat of the sun.

Her mother informed me that she often seemed to lose her recollection and consciousness for the space of a minute or two during these attacks, and that her health had appeared to decline from last spring, at which time they commenced.

About six weeks since, she remarked that she felt the same kind of "shaking or beating" in her head, which until now she had experienced only in her stomach. From this time her head was never entirely free from pain, and her sight became slightly impaired, so that she could not see to thread her needle; and about the same period, while walking on one occasion in Oxford street, she found herself falling forward to the ground, and would have dropped had she not saved herself by taking hold of the railings. She presently recovered, and returned home, the distance of a furlong, without assistance.

Three weeks before she died, she fell upon her face in the street, and remained insensible for a few minutes; after which she was conducted home with her usual headach.

On Monday, October 8th, she consented for the first time to receive medical advice, and accompanied her mother to my house, when I obtained the above account. I found that she retained the senses of hearing and smelling unimpaired, as well as her appetite; her sense of taste had been deranged for months past, but this proceeded, as she thought, from the heat of her mouth. Her countenance was now strongly marked with despondency, and she exhibited an air of stupid indifference, which would have induced me to believe her intoxicated or insane; but, upon inquiry, I found her intellect perfectly sound, and her habits of life most abstemious.

Her pulse ninety-six, labouring, but not hard or full; tongue furred; bowels habitually costive; countenance florid, but as if chilled by cold. I prescribed a blue pill every night, and a compound colocynth pill every morning, and ordered her to be cupped on the back of the neck to sixteen ounces.

On the following morning she was much relieved, and enlivened in her general appearance.

On Tuesday night, however, the pain in the head recurred with increased violence, accompanied by sickness, and continued nearly all night.

In the morning I found her cheerful, and rather improved than otherwise in every respect. To take one ounce of Epsom salts tomorrow morning, and to continue the pills.

October 19th.—She went to bed last night tolerably well. At half-past one o'clock, however, she got out of bed, and awakened her mother, who inquired what she was doing? to which question she replied, that she was opening the shutters to admit the light, because the room was so dark; whereas there was a candle burning in the room, and no shutters whatever to the window. Her mother arose in time to prevent her falling to the ground, and replaced her in bed.

From this time she became comatose, and I was sent for in the forenoon. I found her perfectly devoid of intellect, and almost entirely deprived of sensation and voluntary

motion; with a small, rapid, and labouring pulse; the feet cold; the pupil small and fixed; the countenance not in the least distorted; the breathing rather laborious, but not otherwise unnatural. She shrunk from the examination of the pupil, but evinced no other sign of sensation.

To be cupped to twelve ounces immediately, and a large blister applied to the back of the neck. Spirit lotion to the head; and an enema of compound extract of colocynth and gruel as soon as possible.

At noon she appeared a little revived from the cupping, and uttered a word or two upon being disturbed; her pulse had, however, increased in frequency, with scarcely any augmentation of its strength; and she died at one o'clock on the following morning, without having manifested any return of consciousness, or exhibited any other symptoms than those of pure coma.

Dissection.—There were extensive cicatrices upon the arms, neck, and chest. One side of the thorax was considerably depressed by a distortion of many years' standing, but the lungs were free from any unnatural adhesions, and every part of the trunk perfectly healthy.

On opening the head, the vessels of the meninges appeared rather turgid, and an extravasation of recent blood was found beneath the left parietal bone, between the arachnoid membrane and the pia mater, but its quantity did not exceed a table spoonful, and was diffused over a circular space of three inches diameter.

The substance of the brain was unusually firm and healthy. The ventricles contained no more than about one fluid drachm of clear serum.

Upon raising the encephalon from the base of the skull, there was discovered a tumour of the size of a large walnut, attached to the pia mater of the base of the brain, and altogether inseparable without violence, from the sella turcica, so that an attempt was made to remove the adjacent bone, together with the brain, but without success, in consequence of the restraint which the presence of the friends imposed. The soft parts being at length separated, the base of the tumour appeared to have filled the sella turcica, which was left clean by its removal, and its chief bulk had been situated so as to separate the corpora albicantia and the optic nerves more than an inch and a quarter from the posterior clinoid processes.

The tumour itself was nearly spherical, enclosed in a fine transparent membrane, excepting where it was cut away from the bone, and of so firm a texture that I was induced to believe it solid throughout. Upon cutting into it, however, after it had been macerated in alcohol for four or five days, I found it to consist entirely of coagula of blood, deposited in several distinct layers, which, like those of an aneurism, were paler on one side, viz. towards the bone, and softer as they approached the corpora albicantia, where there was a cavity as large as a filbert, containing recent coagulum.

With the utmost pains, I have been unable to detect any direct communication between the tumour and the adjacent arterial trunks: three or four comparatively minute branches of the left anastomosing artery of the circle of Willis are, however, so closely connected with its membranous envelope, that one of these may probably have furnished its contents. The preparation not having been injected, it is impossible to determine this point so accurately as might be desired. I hope, however, that the account here given may not be altogether useless, as the symptoms described were sufficient to create a suspicion in my mind, from the first, of the true nature of the disease, and enabled me to foretel to a medical friend the result of the dissection with tolerable accuracy.

From the London Medical and Physical Journal.

FUNGOUS HÆMATODES IN THE RIGHT EYE, *with an anomalous Tumor at the Base of the Brain.* By MARTIN WARE, Esq.

In April, 1812, Miss M., about forty years of age, consulted my late father on account of a total blindness in the right eye. From a memorandum of the case taken at the time, it appears that she was then suffering from violent pain in the eye, and that the pupil was much dilated.

This lady had for many years been subject to frequent returns of pain in the head, which were not relieved by any mode of treatment that had been adopted.

In June, 1815, she favoured me with a visit, when I found that the measures prescribed by my father, three years before, though attended with temporary relief, had been productive of no permanent benefit. The pupil still continued dilated, and the sight was quite destroyed.

For several successive months, I had many opportunities of seeing her, during which time the returns of pain in the head and eye were frequent and violent; but, with the exception of the dilated pupil before mentioned, there was no apparent alteration in the figure or structure of the eye.

In December, 1816, the eye began to enlarge, and soon afterwards the cornea became opaque; the vessels on the globe of the eye being also considerably distended.

In January following, I first met the late Mr. Chevalier in consultation upon the case, and was favoured with his assistance on different occasions until the decease of our patient. An operation for the removal of the eye was in the first instance recommended, to which she readily consented: we were, however, induced subsequently to alter our opinion with respect to that advice, upon being informed by her friends that they had perceived an increasing imbecility of her mental faculties, which, in addition to the pain of the head under which she had so long suffered, induced us to fear that the disease was

not confined to the eye, and consequently that no permanent benefit would be derived from the proposed operation.

At this time the internal organization of the eye was entirely destroyed, its place being occupied by a tumour which protruded considerably beyond the boundaries of the socket. The pain in the eye, which before had been only occasional, was now constant, and resisted every means of relief employed. In this state our patient continued until the end of May, when she was suddenly attacked with constant nausea, and frequent vomiting; the tongue being entirely covered with a thick brown fur, and the pulse becoming feeble and variable.

Early in June, she suddenly lost the sight of the left eye, which, as well as the sense of hearing, had till then remained perfect. She became gradually weaker, and in a few days sunk into a state of coma, in which she continued several days, and expired on the 11th of August.

Dissection.—On raising the anterior right lobe of the cerebrum, a soft, irregularly shaped, dark-red tumour was seen to proceed from the roof of the orbit, near the crista galli, and to extend backwards over the sella turcica, having in its progress totally disorganized the optic nerves at their decussation. On tracing it, it was found to extend into the substance of the thalami, giving a rotten appearance to the cerebral substance in its vicinity. Inferiorly, it terminated almost immediately before the mammillary processes. At first we had no doubt that this tumour proceeded from the diseased eye, and that we should find the orbit carious: but subsequent examination showed this presumption to be erroneous. The orbit was perfectly sound, and the tumour was attached to, and appeared to have proceeded from, the dura mater only, extending backward as it grew.

The disease within the orbit was confined to the globe of the eye itself, and contained within its coats. The optic nerve, at its entrance into the eye, was sound, but shrunk; and the muscles of the eye and upper eyelid, though pressed close against the periosteum by the enlargement of the eyeball, were separable along their whole course by very easy dissection, after the bone was broken away. A vertical section of the globe itself, from near the outer canthus of the orbit backward, showed the humours to have been entirely removed, and their place supplied by a fungous mass, consisting of many small vascular portions blended together, some of a dark colour, and not unlike the parenchyma of the liver in substance; others were of a whitish hue, resembling brain.

From the London Medical Repository.

A CASE OF OSSIFICATION IN THE MITRAL VALVE OF THE HEART; *with the Dissection, and Remarks.* By F. Bailey, M.B., &c. &c.

George Howard, æt. thirty-five, after a very severe exertion in running, was, on the 25th of April, seized with a violent palpitation of the heart, accompanied by intense headach. He continued, however, working at his trade, which was that of a shoemaker, for the space of three weeks afterwards. The complaint then became so distressing as to compel him to quit his occupation, and he sought medical advice; but obtaining no relief, he was, on the 6th of July, admitted a patient at the Reading Dispensary. On that day I visited him, and noted down the following symptoms—Vehement palpitation of the heart, distinctly heard on the right side of the thorax, but the beat most irregular,—sometimes eight or ten strokes in rapid succession, and then an interval,—at other times only two or three hurried pulsations between the intermissions; the carotids bounding; the pulse at the wrist small, irregular, and difficult to enumerate; respiration very quick and laborious; all the symptoms much aggravated by the slightest bodily exertion, by surprise, or any attempt to lie down in bed; lips livid; eyes glassy; countenance pallid, and anxious; copious discharge of mucus and saliva, amounting to more than a pint daily, and sometimes tinged with blood; urine scanty, and loaded; ankles œdematous; loss of appetite and disturbed sleep; but no fever.

I ordered a blister to the chest, an antispasmodic and diuretic draught, and enjoined perfect quietude. By these means some temporary relief was afforded; but the disorder, in defiance of every remedial measure, made rapid advances; and, on the 13th of September, he became jaundiced, and complained of pain in the hepatic region. He was now too weak to sit erect, his legs being greatly swollen; and the expectoration, though equally copious, containing more blood than formerly. At this time, also, he suffered much from pain in the right arm, which, at intervals, became excruciating.

On the 21st of September I found him in a state of exhaustion, labouring for breath, and with a weak, fluttering pulse, which could not be numbered. The palpitation had now greatly subsided, and the expectoration had ceased. In this state he continued until the following morning, when colliquative sweats made their appearance; and he soon afterwards quietly expired.

Dissection.—By the assistance of Mr. S. Workman, a surgeon of this place, the body was examined on the 24th. It appeared greatly emaciated, and the skin assumed a deep yellow colour. On opening the cavity of the abdomen, the liver was found inordinately enlarged; the lowermost point of the right lobe descending to within an inch of the ilium, and the left lobe extending very far into the left hypochondrium. The increased bulk of this viscus had forced the stomach from its natural situation downwards, and towards the left side. The veins of the stomach were inordinately gorged with blood; the gall-bladder contained a quantity of unhealthy bile, which, however, could not obtain its exit, by reason of an obstruction (a deposition of lymph) in the course of the ductus communis. Three quarts of

very offensive bilious serum were taken from the left sac of the pleura; and the lung of this side was so condensed, that its margin reached only to the fifth rib, and it adhered very strongly both to the mediastinum and pleura costalis. On the lower surface of this lung, and that portion of the pleura costalis from whence the lung had receded, coagulable lymph had been poured out in such abundance as to present a honeycomb appearance, and to constitute, as it were, a cyst or cavity analogous to that circumscribing abscesses, which cavity served as a receptacle for the effused serum. An incision having been made through the substance of the lung, it was found distinctly hepatised. About two ounces of serum were evacuated from the right sac of the pleura; but the lung of this side seemed quite healthy.

The heart, being the chief object of inquiry, was, with its investing membrane and large vessels, removed from the body, and seperately examined. It had evidently attained a much greater size than natural. The external surface of the pericardium appeared highly vascular and loaded with blood, and adhered every where to the surface of the heart—in most parts very firmly; but here and there the adhesions were weak, and in one or two points merely gelatinous. Opposite to the auriculo-ventricular opening of the left side, there was a bony deposit, about the bigness of a shilling. The auricles, instead of being loose and pendulous, were agglutinated to the substance of the heart by lymphatic exudations. The right auricle and ventricle, but particularly the former, appeared greatly enlarged and gorged with blood; but the tricuspid valve, and the pulmonary artery with its semilunar valve, exhibited nothing deserving mention. On laying open the left auricle, a bony mass was discovered at the origin of the mitral valve; and it was ascertained, on further inquiry, that the *one-half of that valve had degenerated into a thick osseous substance.* The other portion of the valve was much thicker than usual, and approached to the nature of cartilage. The aorta and coronary vessels were in a sound state. The substance of the heart assumed a darker colour than usual, and had become *so soft and friable*, especially the walls of the left ventricle, as to be penetrated with the slightest touch of the blunt end of a probe. It is also worthy of remark, that the left ventricle contained a considerable quantity of black coagulum.

Remarks.—From the detail we have now given, it must be sufficiently obvious that the primary cause of my patient's death was an ossification of the mitral valve. This valve, having thus lost its natural elasticity, could no longer prevent regurgitation from the left ventricle. Hence, congestion in the lungs and venous system, to which two occurrences the principal phenomena of the dissection are fairly referable. To the pulmonary congestion must we ascribe, not only the inordinate effusion into the left cavity of the chest, with its concomitant symptoms, but that copious expectoration, also, of blood and mucus, by which nature seemed to be continually endeavouring to effect her relief. The accumulation of blood in the venous system, on the other hand, affords a satisfactory explanation of the œdematous extremities, the livid lips, and, in all probability, of those exudations of lymph by which the pericardium was agglutinated to the surface of the heart. The extraordinary engorgement of the gastric veins was, doubtless, owing to the congestion which took place in the portal circle, and which, aided by the obstruction in the ductus communis, could scarcely fail to produce enlargement of the liver. In the narration of my patient's case, the pulse at the wrist is stated to have been invariably weak: to the touch, also, it gave the sensation of a partially filled vessel. Now, when it is recollected, that only a portion of the blood projected by the left ventricle could have entered the aorta and its ramifications, by reason of the imperfect condition of the mitral valve, the circumstances are readily accounted for. The cause of the dilatation observed in the right side of the heart, is too obvious to require any comment; but it is surprising *that the exterior of this important organ, together with the right sac of the pleura, should have suffered such extensive derangements in regard to structure, and have exhibited such striking proofs of previous inflammation with so little general disturbance.* The cardiac region was, indeed, often referred to as the seat of pain; but through the whole course of my patient's disorder there occurred no evidence of feverish development. The pulpy state to which the substance of the heart, especially of the left side of it, was reduced, no less than the dark-purple colour which it assumed, are circumstances well worthy of remark. The former I am disposed to attribute to the long-continued and violent action of the organ, by which, as in the case of hunted animals, its texture might have been softened and broken down; and a defective decarbonization of the blood might well serve to explain the latter occurrence. The small bony excrescence noticed on the surface of the heart, in the neighbourhood of the left auriculo-ventricular junction, when taken in connexion with the actual state of the mitral valve, seemed to indicate a disposition in the ligamentous membranes of this organ, generally, to ossific formations. The sudden manner in which the palpitation succeeded the violent exertion made by my patient, added to his perfect exemption from all similar attacks previously,* inclined me strongly to believe, that the valve itself would be found in a lacerated condition; but in this ex-

* The wife of this person has since learned that, so long ago as last Christmas, he frequently complained to a friend of pain in the region of the heart. But at the time she first gave me an account of his disorder (upon which, of course, my judgment was founded) she was altogether ignorant of the circumstance.

pectation I was deceived. The dissection proved, that, long antecedently to the accident, ossification had commenced; and that the extraordinary effort could have only operated as an exciting cause of all that subsequently happened. The imperfection of the valve was not such, perhaps, at the moment of this athletic attempt, as to unfit it for ordinary purposes; but the event has shown its incompetency to protect the circulation from the disturbance of a great and sudden emergency, from whence sprang a series of calamities which death alone could terminate.

I cannot conclude these remarks without stating my conviction, that, for several weeks previously to the decease of my patient, one lung had performed, though imperfectly, the important office of respiration; a fact which, if not altogether novel, is at least curious in a physiological point of view.

From the Lancet.

DISCOVERY OF A CIRCULATION IN INSECTS.

The following account of circulation in insects, is taken from Professor Carus's Zootomy, a well executed translation of which work has just appeared by Mr. Gore of Bath:—

Professor Carus's observations were first made upon the larva of the *agrion puella*, which swims with great velocity by means of three vertical laminæ attached to the caudal extremity, and diverging from each other at very acute angles. In the young larva, there is no trace of any wings; but as it advances in age, rudiments of wings make their appearance over the rings of the thorax, and gradually increase to their full size, whilst the caudal laminæ, on the contrary, in the same proportion, fade away, and are partially or completely detached. Each of the caudal laminæ, in its natural vertical position, presents an inferior abdominal, and a superior dorsal, edge, has two tracheal trunks running along its centre, and ramifying through it, and consists of granular substance contained between two strata of the external integuments. A current of blood-globules enters each caudal lamina, somewhat nearer to the dorsal than the abdominal margin of the lamina. The path or channel thus formed in the midst of the granular substance is perfectly transparent, except where it is occupied by the blood-globules, or crossed by branches of the trachea. The parietes of the channel are not strictly defined, nor formed by any thing like the coats of a vessel, the blood, with its globules, circulating through the granular parenchyma, a circumstance, however, which is not peculiar to this case, but also occurs generally in the first states of the circulation, as it presents itself, for instance, in the embryo of fishes, and in the figura venosa of the incubated egg. The blood-globules are elongated like a grain of wheat, considerably larger than those of the human blood, and float in a fluid, which is invisible on account of its transparency, but the existence of which is proved by the variations in the position of the globules in the current, sometimes following its direction, at others crossing it transversely, or more or less obliquely.

When the animal is vigorous, this current is unclosing and uninterrupted, although its velocity is accelerated at regular intervals, and that not only in the abdominal or excurrent, (arterial,) but also in the dorsal or recurrent, (venous,) part of its course through the laminæ. When the animal becomes exhausted, or the caudal laminæ exsiccated, the circulation through them is uninterrupted, and, in the same manner, as under the same circumstances in the larvæ of frogs and salamanders, the disturbance displays itself not merely by a cessation of the process, but also by retrograde movements of the currents, or by oscillatory motions of the blood-globules.

In proportion as the wings are developed, the circulation in the caudal laminæ diminishes, and ultimately ceases, preparatory to the detachment of the laminæ themselves. At the same time, however, the circulation presents itself under a new form in the wings themselves. These organs consist of two layers of the integuments, including between them a collection of granular substance divided like network into little islands, by the intersection of transparent canals, the largest of the canals taking its course round the margin of the wing, and the whole organ being interspersed with minute tracheæ. These canals present a circulation similar to that in the caudal laminæ, the excurrent (arterial) stream taking its course along the inner margin of the wing, and the recurrent (venous) returning along the outer—whilst, occasionally, other transverse currents take their course through the net-work of the wing, from its inner to its outer margin. As the wings are further developed, the circulation in them, like that in the caudal laminæ, gradually becomes weaker, and ultimately ceases.

The aquatic larva of the ephemera *vulgata*, according to M. Carus, presents the phenomena of the circulation with still greater distinctness than the preceding animals, and even more clearly than it is possible to recognise it in the larva of frogs and salamanders. In it the circulation is at once visible (with the microscope) in the three last segments of the body, but by a little attention is discoverable, not only in the three terminated spiculæ, and in the upper phalanges of the legs, but also in the head, and particularly in the roots of the antennæ. In the posterior part of the body, there are on each side two currents of blood, not bounded by any regular parietes like those of vessels situated on each side of the intestinal canal, and rather towards the abdominal surface of the animal: of these two streams on each side, the outer is the smallest, and the inner the most considerable. The external one resembles the lateral current in the larvæ already described, and communicates with the internal by several intermediate branches: it is probable from this one too,

that the lateral streams are detached in the form of loops into the upper phalanges of the legs, though it is not possible precisely to ascertain this point, nor even whether the two lateral currents on each side continue distinct in the thorax, which it is most probable that they do, as the current in the upper phalanges of the legs is of the same size as the external of the two which appear in the posterior part of the body, from which the internal differs by its greater size. At the ninth abdominal segment of the body, these two lateral currents on each side, which flow posteriorly from the head towards the caudal extremity of the body, change their direction, and are inflected so as to enter the pulsating heart, from which the current of blood is again impelled towards the head. Before the lateral currents enter the heart, they give off three streams, one for each of the three caudal spiculæ, running through the greater part of the length of each spicula, and being then suddenly reflected towards the heart. It is not possible to ascertain precisely from which of the two lateral currents of the body these caudal streams are detached, though, most probably, from the external; that they come direct from the heart is improbable, as the excurrent (arterial) division of each (caudal) stream corresponds to the abdominal surface of the spicula, and the recurrent (venous) to the dorsal, the heart being situated on the dorsal, and the lateral currents on the abdominal aspect of the body. The currents in these caudal spiculæ present the phenomena of the circulation with peculiar distinctness, and are particularly remarkable from the circumstance that the excurrent and returning streams, though in close approximation, and not separated in any visible manner, continue to flow without disturbing each other. The excurrent stream is accelerated at regular intervals, corresponding to the pulsations of the heart; the recurrent, on the contrary, being always somewhat more sluggish, and the first to stagnate and cease, when the strength of the animal is impaired.

When the extremity of one of the caudal spiculæ is cut through, the blood-globules are expelled in some quantity with an evident jet, and accumulate on the injured surface, where, when they are dried up by exposure to the atmosphere, they change their natural limpidity for an evident apple-green colour.

It has been already mentioned, that the heart propels its contents through the anterior part of the dorsal vessel towards its head; the current, however, in the thorax, and in the upper part of the head, is concealed by the opacity of the horny segments of the cutaneous skeleton, and by the contents of the stomach. In the anterior part of the head, however, we can discover currents in the roots of the antennæ, forming loops like those in the legs, the current in each preceding from the cranial surface of the head, and in returning through the root of the antennæ, taking its course towards the laryngeal region. Nay, by means of the direct light of the sun thrown on the object, an indistinctly defined, but very evidently existing, current may be traced forwards through the thorax and over the upper part of the head, and may be seen to be reflected towards the posterior part of the body in the laryngeal region. Hence, consequently, this larva presents the first instance in which it was possible to trace a true and perfect circulation through the whole body.

The endeavours of M. Carus to discover any evidence of a circulation in fully developed insects, *e. g.*, house flies, gnats, ephemeræ, &c., were without success until a very recent period (May, 1827.) On examining the ways of the semblis *vividis*, immediately after its metamorphosis from the larva state, he discovered the circulation through all the vessels of the wings with the utmost possible distinctness. The wings were still soft, but perfectly developed for flight; the circulation was still visible, though in a less vigorous state, two days afterwards, when the animal died. Still more recently he has observed currents of blood in the larvæ of water-beetles, (hydrephilus and dyticus,) and adds, from a notice by A. V. Humboldt of the travels of Ebrenberg and Hemprich, (in Africa?) that those naturalists have also observed similar currents in the wings of a maubis. Hence it follows, that even at this early period of the discovery, a circulation has been detected in four orders of insects, viz., neuroptera, coleoptera, diptera, and orthoptera, a circumstance that affords the strongest excitement to further investigation in other insects, and under various circumstances.

Of the objects and character of this circulation little can at present be said; its existence, however, in the rudiments of wings tends, in a very remarkable and unexpected manner, to confirm the idea deduced by Oken from analogical considerations, viz., that the wings of insects are exsiccated gills. As regards the cessation of circulation in the perfect insect, or rather its limitation to the dorsal vessel, M. Carus endeavours to show that, though an extreme instance, there are analogous cases, in which, though of less extent, a circulation that once existed no longer presents itself in the fully developed state. Thus, the medulla contained in the cavities of the bones of young birds disappears as they advance to full development, and with it the vessels by which it was supported. Such, also, is the case with their feathers, which, in the early periods of their formation, are exceedingly vascular, and thus, probably, connected with the respiratory function. So, also, in the fœtus of mammalia, the allantoid circulation disappears, and its vessels are obliterated in proportion to the development of pulmonary respiration. The fact that the currents of fluids in the larvæ of insects are not defined by vascular parietes, enables us to comprehend the rapidity and facility with which the traces of the circulation are lost in the perfect insect. On the other hand, the existence of a circulation at one period, and its cessation at another, elucidate many circumstances connected with the physiology of these animals; for instance, the con-

trast between the rapid growth and transformation of the larva, and the stationary existence of the perfect insect; the inconsiderable size to which the body attains in this, as compared with other classes of animals; the frequently very short duration of the existence of the perfect insect, in proportion to the prolonged periods of its larva state; its almost total independence of nutrition; and the absence of the power of reproducing parts that have been lost or destroyed.

It still remains to determine at what period of development the phenomena of the circulation first present themselves; to observe more precisely its occurrence in other orders and species, particularly those where the larva is not aquatic, and where, perhaps, it exists only in the ovum; to fix the period and manner of the cessation of the currents of blood, and to distinguish, on the one hand, the cases where the circulation may be supposed to cease, even in the larva state, or, on the other, to continue in the perfect insect.

Lastly, it may be remarked, that the phenomena of this circulation, so far at least as it has been traced, do not throw any light on the obscure subject of the mode of nutrition in perfect insects, which, therefore, must still be supposed to be effected, according to the idea of Cuvier, without the intermedium of vessels. On the other hand, the demonstration of the original existence and subsequent cessation of a circulation, renders more than ever untenable the hypothesis lately suggested by Dr. Kidd, (Phil. Trans. 1826,) that the tracheæ, already recognised as respiratory organs, are, at the same time, employed in the conveyance of nutritive fluids.

From the London Medical and Physical Journal.

MEMORANDUM OF TWO CASES OF CÆSAREAN SECTION, *performed at the Civil Hospital, Prague.* Communicated in a letter from Dr. Lefevre to Mr. Travers.

During my stay at Prague, I had an opportunity of seeing two women who had undergone and recovered from the Cæsarean operation. The one was a Jewess, very much deformed by curvature of the spine, and of very small stature. She was pregnant three years ago for the first time, and was twenty-seven years of age. She was three days in labour, and had no other assistance than that of a midwife, who did not even attempt to deliver her by means of instruments. On the fourth day she was conveyed to the hospital, and, as the pelvis was found on examination to be excessively contracted, the Cæsarean operation was immediately determined upon, and performed by Dr. Fridzt, surgeon and clinical professor to the Civil Hospital at Prague. The operation was not followed by any serious consequences, and the patient was dismissed cured. Upon examining the woman by permission of the professor, I found a cicatrix extending from the umbilicus to the symphysis pubis. As the body was much inclined towards the left side, so the cicatrix was of a semilunar form, and the integuments of the abdomen were plaited as it were in large folds. It is more than three years since the operation was performed; the woman is in perfect health, and gains her bread by labour. She complains only occasionally of pain and numbness in both thighs.

The second case was still in the hospital, and had been operated upon eight weeks previous to my seeing her. She is the wife of a Bohemian peasant, and has had one child,—the labour was perfectly natural. She became again pregnant, and gestation went on naturally till the end of the sixth month, except that the tumour of the abdomen was more projecting than usual, and inclined towards the right side. After the sixth month, the movements of the child were not sensible; the breasts became enlarged, and milk oozed from them for a short time. There was also slight uterine hemorrhage. At the end of the ninth month, labour pains came on, were very severe, but subsided, and returned at intervals of ten days till the end of the eleventh month. She was at this time taken to the hospital, and examined by Dr. Krombohoff, professor of midwifery in the University of Prague. He found a spheroidal tumour in the vagina, and the os-uteri turned towards the left side. The case was pronounced one of extra-uterine pregnancy, and the woman was conveyed into the surgical wards, and operated upon by Dr. Fridzt. The incision was six inches in length, extending from half an inch below the umbilicus to the symphysis pubis. The head of the child, which presented, was extracted by a simple manœuvre. The placenta and membranes were left in the abdomen. The child had been dead apparently some time. The wound was united by means of adhesive plaster, about an inch of the inferior portion being left open for the escape of fluids from the abdomen. These were the only means employed. She was once bled from the arm, and leeches were once applied. The wound is now almost completely healed, a small fistulous opening remaining only at the inferior portion, from which a healthy pus is secreted. She is now taking tonics, and is allowed meat, but neither wine nor beer. The functions are all becoming natural. Stools have hitherto been procured only by means of enemas. The countenance is animated and cheerful; the pulse small, but not irritable; the appetite good. I saw the woman three times during my stay at Prague, and there is every probability of her speedy recovery. The name written on the board at the head of the bed was "Pototza Veronica, æt. thirty-two, operat. 10 July." I requested Dr. Fridzt to allow me to have a statement of the case in writing, to which he most kindly consented, and to which he has subscribed his name.

I enclose it as it was drawn up by a German student; it contains merely what I have writ-

ten. This is the third operation performed at this hospital by the same professor: one of these only had failed.

CASE OF ENORMOUS EXOSTOSIS OF THE STERNUM.

In a former number, we related an extraordinary case of osteo-sarcoma of the ileum and femur, where the bony growth measured twenty-four inches in circumference, and which is now rapidly tending towards a fatal termination. The following account will show to what a size pure exostosis can attain, and will likewise exhibit the difference between it and the true osteo-sarcomatous enlargement.

———, about 50 years of age, was sent to the Hospital by Dr. Scott, of Barnes. Arising by a very broad attachment, from nearly the whole of the sternum except the superior part of its upper bone, adhering to the cartilages of the ribs and extending so far outwards as to elevate the papillæ, is a very large osseous tumour, measuring eighteen inches in circumference; its surface, which is smooth and not marked by any of those protuberances which were a distinguishing feature in the case of osteo-sarcoma, is evidently composed throughout of the same solid materials, and does not afford to the finger that feeling of elasticity which was experienced in the other, at those places where the fleshy intermixture existed. The integuments covering the swelling are much stretched, and have become, at the most protuberant point, inflamed.—The disease is attended with little pain, and is principally inconvenient from its size and weight. His general health is in a very indifferent state; he is dyspeptic, subject to rheumatic attacks, and occasionally suffers from dyspnœa.

The tumour commenced nine years ago, without any apparent cause, with general enlargement of the sternum at that surface where it is now attached, which has gradually increased till it has assumed its present immense size.

The treatment recommended was, great attention to the general health, the use of alterative medicine, the repeated application of leeches to the tumour, and after the employment of these means the insertions at its base, of two or three small setons.—*Lancet.*

From the Lancet.

PALSY OF THE LOWER EXTREMITIES, *occurring suddenly, and independent of Injury to the Spine.*

The following case of palsy of the lower extremities, taking place suddenly, and without the occurrence of injury to the spinal marrow, or any evidence of cerebral disease, is highly interesting. It will be observed from the history of the case, that the disease was preceded by a disordered state of the alimentary canal; and when we consider that in children paralysis is a frequent occurrence, from irritation in the primæ viæ, especially during the progress of dentition, it is not difficult to suppose that, in the present case, the disease was *sympathetic;* that is to say, mainly dependent on the depraved condition of the stomach and bowels.

H. Smith, a pallid, unhealthy-looking young man, was admitted into Luke's ward, under the care of Mr. J. H. Green, on the 12th of July, on account of swelled testicle, and enlarged absorbent glands of the testicle.

He had been in the Hospital about three weeks, under treatment for these complaints, when, in the course of a night, having previously eaten a hearty supper, he found himself very unwell, having a sensation of chilness, with much uneasiness at the pit of the stomach: his bowels had not been moved for two or three days. He got out of bed, and in attempting to walk, found that he staggered very much; he laid himself down again and slept; but in the morning found that his lower extremities were completely paralytic—devoid both of sensation and volition. He experienced at this time considerable pain in the upper part of the loins; when visited by Mr. Green on the same day, the spine was examined carefully, and there was some tenderness manifested on making pressure in the upper dorsal region. Mr. Green therefore directed cupping-glasses to be applied to this part, a strong purgative dose of calomel and scammony, with a terebinthinate enema, to be administered. Subsequently, cupping was had recourse to, under the direction of Dr. Williams, at the epigastric region; the back was also again cupped, and blisters repeatedly applied. These, with the occasional exhibition of purgatives, were the principal means employed, and with a beneficial result, the paralytic affection gradually lessening. On the 8th of September, sensation in the lower extremities was perfect, as were also the motions of the limbs, apparently; but the patient stated, that on attempting to walk, he found such a weakness in the back, that he could not support himself in an erect posture. He continues in the Hospital at present.—*St. Thomas' Hosp.*

From the Medico-Chirurgical Transactions.

CASE OF INJURY OF THE HEAD.

By Dr. Rogers.

Mark George, æt. 19, on Sunday morning, July 10, fired off a gun at some crows, which, being overcharged, burst, and injured his face and head in a most dreadful manner. He was able to walk some hundred yards immediately after the accident, but at length, being overpowered by loss of blood, he fell, and was conveyed to a neighbouring house. Shortly after he become convulsed, and was totally deprived of his senses. In this condition I first saw him, when the assistance of three or

four persons was required to keep him sufficiently still to enable me to examine a wound of considerable extent on the forehead, just above the centre of the left superciliary ridge. After enlarging the external wound I discovered an aperture, about the size of a crown piece, in the frontal bone, through which a considerable quantity of the substance of the brain was oozing, and as much as a table-spoonful adhered to the hair and integuments around. Having fully exposed to view the nature of the injury, I gently carried my finger round the jagged edge of the bone, and introduced it within the aperture, in order to ascertain whether any fragments of bone were lodged there; but as far as I could feel I did not discover any. The wound was lightly dressed, and about sixteen ounces of blood were taken away from the arm, when he became more composed, and passed a tolerably quiet night. Both the eyes were closed from tumefaction of the palpebræ, and the face was also much bruised and swollen. The next morning he was more tranquil, and appeared sensible when questions were put to him; the bowels were properly attended to, and saline medicines with antimony administered every fourth or sixth hour. Fomentations were applied to the face.

July 12.—Symptoms favourable, except the pulse, which, although not exceeding forty, was extremely tense and full. Fourteen or sixteen ounces of blood were therefore taken from the arm, and a purgative given. His nourishment consisted of tea and thin gruel.

July 13.—The pulse was somewhat quicker and softer. The dressings were removed altogether, and a soft poultice applied, except immediately over the wound, where a light dossil of lint with a pledget of cerate dressing was placed. The surface of the skin was moist and temperate, his sleep undisturbed, and he appeared quite rational and collected in his answers to the various questions put to him by the attendants.

July 14.—Went from this period until the 21st with little alteration in his symptoms, when, from fresh accession of febrile heat and irritation, it was judged expedient to repeat the bleeding from the arm to the amount of ten or twelve ounces, and to counteract the stimulus excited by the heat of the atmosphere at this time, the room was kept as cool as possible, and his body and extremities were frequently sponged with cold vinegar and water.

July 22.—Passed a better night, and appeared altogether more comfortable. The wound was lightly dressed in the centre, and the surrounding parts continued to be fomented and poulticed three or four times in the course of the day: the fœtor from the wound was great, and the discharge very copious, but the surrounding soft parts had a healthy aspect.

July 25.—Symptoms generally favourable, no increase of heat, pulse tolerably soft, sleep almost natural, bowels regularly relieved, perfectly sensible, but the discharge from the cavity very abundant on each removal of the dressings.

July 27.—More pain in the head, bowels not relieved, some stiffness in the lower jaw, greater reluctance in answering questions.

July 28.—The bowels relieved by a purgative enema, stiffness of the jaw gone off, more collected.

July 29.—Able to take more nourishment than during the last two or three days, but still some sense of choking in the throat, and difficulty in swallowing; the discharge from the wound profuse; a little inclination to drowsiness, but nevertheless perfectly sensible; pulse about sixty, soft and regular.

August 1.—The difficulty of deglutition nearly subsided, and he was able to take a draught of port wine and water, broth, &c.

August 2.—The discharge continued very abundant, and the bodily strength apparently affected by it; but by improvement in diet, and giving pulv. cinchonæ ℈j every six hours, no other unpleasant symptom followed.

August 4.—Upon touching a point within the cavity, thinking it looked like a portion of bone, I was astonished that it resisted the probe like a harder substance than bone, and upon examining it with my finger I thought it felt like a portion of iron. I attempted to get hold of it with a pair of common forceps, but it repeatedly slipped from my grasp, and as it appeared to give the boy excessive pain (like drawing out his eye, as he expressed it,) I desisted.

August 5.—I more distinctly found that the substance was iron, and that the projecting part of it resembled a screw. I now procured the assistance of four persons, in addition to that of Mr. Smith, a medical practitioner who attended with me, and after many efforts and considerable manual exertion, I succeeded in removing the substance from the head. I found it impossible to get sufficient hold of it to extract it by means of the forceps, I therefore made use of the common trephine elevator, with which I raised it from its bed, when the subsequent part of the operation was very easy. The body extracted proved to be the breach-pin of the gun, consisting of solid iron, three inches in length, and weighing exactly three ounces. I left him tolerably quiet and easy, betraying no additional unfavourable symptoms, the wound was dressed light and simply. The operation did not occasion any hemorrhage.

August 7.—For many days from this time no interruption occurred to his gradual improvement; but two or three small portions of bone came away with the dressings.

On the 16th he was carefully removed to his own home about a mile distant: he bore the removal without much fatigue.

August 25.—Going on well, the cavity is gradually filling up, and the adjacent parts look healthy; he is able to sit up an hour or two in the day.

September 4.—Remains in an improving state, free from any stupor, weight, or lightness of the head; is able to walk about a little

in the house; sleeps well; bowels regular, without the assistance of medicine; appetite good, and perfect recovery appears certain at no very distant period.

September 27.—Very much improved; some more small pieces of bone have come away, and probably more will be thrown out before the wound closes.

November 3.—The boy has continued in a favourable way, a few more small portions of bone have separated from the wound. He walks about, but is not allowed to exert himself in any way.

November 20.—A further separation of bone has taken place, but yet not altogether sufficient to make up the quantity destroyed, more however appears forthcoming. The boy continues extremely well.

December 10.—The boy is now in good health, no further exfoliation has taken place since the last report.

The following particulars have been obtained from the boy and from his mother, who has closely attended him throughout his confinement from the accident:—The boy says that he remembers hearing the report of the gun when he shot at the crow; also that his little brother (who was with him at the time) walked with him into the yard, but that he was obliged to stop several times from faintness. He remembers his father coming to him in the yard. Of what took place for the space of a week after his being taken into the house, he does not appear to have any recollection, although he certainly answered questions, put to him after the first day from the accident, correctly and consistently.

After the first week he readily knew persons who came to see him by their voices, when his eyes were perfectly closed from swelling of the palpebræ.

The sight of the left eye is totally destroyed, but that of the right remains perfect. The smell and hearing are both perfect, which his mother has had frequent opportunities of ascertaining, and she has not found any defect in regard to his memory or general mental faculties since the accident. There does not appear to be any difference between the two sides of the face and head, in point of sensation or power of motion.

Remarks on the preceding Case, by F. Tyrrell, Esq. Surgeon to St. Thomas's Hospital.—Many cases are recorded in which large portions of the cerebrum have been lost without any immediate or subsequent derangement of the mental or corporeal functions; but I am not aware that any case has been attended with the lodgment of so large a foreign body in the cavity of the cranium, for so long a period as twenty-seven days, with the production of so little mischief.

In the first instance we may easily suppose that a portion of the cerebral mass, adequate to the bulk of the breach-pin, escaped from the aperture in the frontal bone immediately the injury was inflicted, and that thus the surrounding parts of the brain could not suffer from compression; but it appears strange that the violence which must have been necessary to force so large a body into the cranium should not have produced more concussion of the cerebral mass than seems to have taken place; perhaps the loss of blood soon after the injury may have prevented the appearance of more urgent symptoms.

The position in which the breach-pin lay was with the screw to the aperture, and the other extremity towards the ear of the same side; the long limb was placed outwards, the short one inwards. From the length and situation of the breach-pin it appears certain, therefore, that both the anterior and middle lobes of the left side suffered; the former must have been very extensively lacerated at its anterior, inferior, and outer parts, the latter probably at its outer part only: thus the mischief appears fortunately to have been confined to parts of the cerebrum unconnected with any nerves essential to the support of the vital functions.

When we consider that not only this solid iron body, but that numerous irregular portions of bone were also lodged for so long a time in the substance of the brain and pressing upon its membranes, it does seem most extraordinary that the boy should have experienced so little inconvenience or suffering.

From the force necessary to extract the iron, I think it not improbable that the extremity of the long limb had penetrated the skull at the lateral part, and that it was thus fixed. Had it been perfectly loose in the cerebral mass, I should imagine that it motion, when the boy changed the position of his head, must have occasioned great suffering, and have given rise to symptoms much more severe than those experienced.

The next extraordinary feature in this case is the trifling effect occasioned by the removal of the breach-pin; the surrounding parts must in a degree have accommodated themselves to its presence, and from a fresh disturbance I should have expected considerable irritation and inflammation to have followed. As the hemorrhage produced by its removal was very trifling, it could not have had any effect in preventing unpleasant symptoms.

From the Edinburgh Medical and Surgical Journal.

Versuch einer kritischen Geschichte der bei Vaccinirten beobachteten Menschenblattern, nebst Untersuchungen über die Natur, die Ursachen, und die Verhütung dieser Krankheit.—Von Dr. A. F. Lûders, &c.

A Critical and Historical Essay on Small-pox, as it occurs after Vaccination, with an inquiry into its Nature, Causes, and Prevention. By Dr. Adolphus Frederick Luders, Physikus of Eckenfôrde in the Dutchy of Silesia, Fellow of the Royal Medical Society of Copenhagen. Altona, 1824. pp. 226, 8vo.

2. *De Varioloidibus et Varicellis.* Scripsit Nic. Christianus Mohl, &c.

On Chicken-pox and the Varioloid Diseases. By N. C. Mohl, Joint Physikus of Copenhagen, and Fellow of the Royal Medical Society of that city. Copenhagen, 1827. pp. 111; 12mo.

There are now, we should apprehend, few British practitioners, whose doubts are not completely dispelled as to most of the questions regarding the antivariolous effects of vaccination, which have been made the subject of general controversy during the last ten years. But it is only of late that the opinions embraced in Britain have been generally received on the continent, particularly in Germany. Notwithstanding the conclusiveness and authenticity of the facts which were presented to the public in this country at an early period of the varioloid epidemic, and the readiness with which, in the course of two or three years, almost the whole profession in Britain were in consequence prevailed on to abandon several of their favourite doctrines and deep-rooted prepossessions, our continental brethren considered the reform too abrupt and too important to be transplanted among them, so long as it was recommended by the authority of foreign experience alone; and they have hesitated to follow our example, till its necessity has at length been forced upon them, by the breaking out of a similar varioloid disease within the sphere of their own observation. Dr. Luders has very ingeniously confessed his own and his countrymen's obstinacy in this respect. A varioloid epidemic, however, having broken out in various parts of the north of Europe in 1822 and subsequently, they have had an opportunity of subjecting to examination the statements originally made in this country, and first of all in Scotland; and the result has been, that the opinions of almost all physicians of eminence in Germany and Denmark now coincide with our own. We shall presently find, from the works of Dr. Luders and Dr. Mohl, that this examination has not been conducted without several interesting additions having been made to our knowledge.

The authors are placed in circumstances singularly favourable for investigating accurately and completely the subject of variolous contagion in all its relations. Living in countries where the efforts of the respective governments to diffuse vaccination have long been indefatigable, and have in consequence been attended with extraordinary success, they have had an opportunity of witnessing the introduction and extension of small-pox in districts where it had long been almost or altogether unknown; and they have also enjoyed the rare and important advantage of each holding the office of *Physikus* or Police-physician for an extensive population, in virtue of which office they have charge of all matters which concern the public health of their district, and in particular are brought directly in contact with every contagious epidemic in all its ramifications. The topics to which their attention has been chiefly turned are—the conditions under which the varioloid disease makes its appearance,—the proposition advanced in 1818 by our townsman Dr. Thompson respecting the identity of small-pox and chicken-pox and the varioloid disease—and the characters of the true chicken-pox, by which it is distinguished from the varicelloid form of modified small-pox. It is on account chiefly of the two last topics, that we propose to turn the reader's attention to the works of Dr. Luders and Dr. Mohl,—the questions involved in them being still made the subject of dispute by the followers of Dr. Thompson's opinions, and the experience of the authors having supplied the medical world with some additional information, which will go far to satisfy all unprejudiced minds where the truth lies.

We shall in the first instance, however, take some notice of what they have said on the causes of the varioloid disease and the conditions under which it originates, because their observations afford proofs on an extensive scale of the accuracy of the doctrines now generally received in Britain regarding the relation in which it stands to small-pox, to vaccination, and to inoculation.

On this subject Dr. Luders has adopted many of the erroneous notions entertained throughout this country when the varioloid epidemic was first announced by the practitioners of Scotland in 1817, 1818. He maintains that the varioloid disease *never occurs after regular vaccination;* and in support of this statement he mentions, that among 223,939 vaccinated between 1801 and 1822 in Holstein, where the measures taken by the government ensure a perfect vaccination, there had occurred down to 1824 only two cases of secondary small-pox; and that in Denmark, among 447,605 vaccinated, only one such case has been met with. He then goes on to state, that the causes of the frequency of the varioloid disease in other countries, and especially in Britain, have been, first, the formation of too few vaccine pustules; secondly, when there was only one pustule, the opening of it accidentally by friction or intentionally to withdraw lymph; thirdly, the employment of vaccine matter of inferior virtue, calculated to produce only a modified vaccine vesicle; fourthly, modification of the vaccine vesicle by constitutional causes, such as cachexia depending on scrofula, syphilis and the like, or convalescence from a violent or exhausting disease; fifthly, modification of the vaccine vesicle by the coexistence of constitutional cutaneous diseases; sixthly, modification arising from external applications, such as camphor, and mercurial or saturnine ointments; seventhly, modification arising from the co-operation of internal remedies, such as mercury, salpetre, or a course of laxatives. Under the third of these heads, on the employment of inferior vaccine virus, he states as causes of its inferiority, first, its having been taken from a vesicle on the teat of the cow not really vaccine in its nature; secondly, from the modified vesicle produced in those formerly vaccinated; thirdly, from the modified vesicle of those who have previously had small-pox

naturally or by inoculation; fourthly, from the modified vesicle frequently produced even by good matter in the less impressible constitutions of adults; fifthly, from the modified vesicle in cachetic habits even among children; sixthly, from the modified vesicle of persons who have at the same time had some cutaneous disease; seventhly, from vesicles which had been some time previously broken; eighthly, from vesicles of too old standing; ninthly, from a dropsical vesicle; tenthly, its having been kept too long after removal from the vesicle; eleventhly, its having been spoiled, though recent, by damp, acid fumes, strong-scented vapours, &c.; and in the last place, its gradual degeneration in consequence of being transmitted by the reproduction of the vaccine vesicle in a great number of individuals successively. He winds up this enemeration by attributing the frequency of secondary small-pox in Britain to the effect of the above-mentioned causes in producing an imperfect vaccination, which, he thinks, must often escape the notice of the profession on account of the careless way in which the progress of the vesicle is watched even at the various public vaccine institutions.

Many of the foregoing statements of Dr. Luders were some time ago advanced in Britain by the believers in the absolute antivariolous power of vaccination, in order to account for its occasional failure, but have by subsequent experience been proved to be erroneous, to the satisfaction of every physician of note in the country. It may appear almost unnecessary therefore, for the sake of the English reader, to put Dr. Luders right. But, although the truth has been pretty satisfactorily established, it may not be amiss to notice shortly the results of Dr. Mohl's inquiries, which are very pointed and conclusive, and in accordance with all the leading views adopted in Britain.

In the first instance he supplies us with a contradiction to the superior immunity from the varioloid disease, claimed for the inhabitants of Denmark by Dr. Luders, in consequence of the strenuous measures taken by the government to ensure the propagation of a perfect cow-pock. If it is true, that only one case of variola occurred among the vaccinated in Denmark, between the years 1801 and 1822, this extraordinary immunity must have been owing, not to any superiority in the method of vaccinating, but to more accidental causes, and most probably to the want of a variolous epidemic of sufficient malignity. For Dr. Mohl, *physikus* of Copenhagen, states, that in the three years preceding 1827, 659 cases came under his care in that city. Such being the fact, it may be anticipated that Dr. Mohl does not attach much importance to the effect of the various causes of a modified vaccination, in engendering the varioloid disease. Accordingly, he assures us he has seen as many attacked among those who had the cicatrices of four or six vesicles, as among those who had one only; that he has never been able to discover any facts in favour of the notion, that opening the vesicle lessens its preservative power; and that there is as little ground for believing that the vaccine matter has in the course of time degenerated by frequent transmission in the human subject.

On the last important point Dr. Luders affirms, that the vesicles which are formed by matter procured by successive reproduction from the original virus which was imported from England, have a less areola, and excite less constitutional irritation, than those formed by virus from the cow after only three or four reproductions in man; and that he now meets with modified vaccine vesicles more frequently, and large, unequivocal, genuine vesicles more rarely, than when he began to vaccinate. But Dr. Mohl states distinctly, that in Copenhagen the vesicles continued to correspond exactly with the original description of Jenner, and that in the late epidemic of that metropolis those recently vaccinated were protected not less, but rather more effectually, than those who had been vaccinated ten or twenty years ago. But more of this presently.

Dr. Mohl's account of the circumstances under which the varioloid disease occurs, is much more accurate than that of Dr. Luders. He observes, that it occurs even among those who have had neither small-pox nor cow-pox; for of 158 cases of small-pox in the unprotected, seventeen had it in its modified form:—That it occurs after small-pox, whether natural or inoculated, and that in such cases it is often a dangerous disease, 31 out of 153 having died:—That it does not occur either in them or in the vaccinated, unless a particular epidemic constitution co-operates:—That it sometimes attacks those who have been vaccinated in the most regular and perfect manner:—That the varioloid disease is not materially modified by vaccination, unless the areola of the vaccine vesicle is fully formed before the variolous eruption breaks out:—That the modification is greater, and the disease milder, if vaccination has been performed a considerable time before:—But that the period within which this rule applies is not unlimited; for *after the first two or three years the varioloid disease is both more frequent, and more severe, the greater the interval which has elapsed since vaccination.*

This last position deserves particular notice, being one upon which the opinions of practitioners are still undecided, and which points at a very essential addition to the present method of practising vaccination. Dr. Thompson maintains, as the result of his experience, that the modifying or preventing powers of vaccination are not weakened by time, (*Account of the Varioloid Epidemic of Edinburgh.*) Dr. Luders is of the same way of thinking; for he asserts,—not, however, from personal experience,—that modified small-pox occurs between three weeks and twenty years after vaccination, without the disease appearing to be rendered either milder or more severe by the intervention of a long interval, (p. 103.) But the observations of Adams, Gregory, Cross, Elsasser, Crowfoote, Oswald, and others, have tended to show that the disease is both more frequent and more violent, the longer the in-

terval which has elapsed after vaccination; and the evidence of Dr. Mohl is very pointedly to the same purport. Of 653 cases of modified small-pox among the vaccinated, none were under three years of age, only fourteen under five, 102 between five and ten, 173 between ten and fifteen, 187 between fifteen and twenty, 156 between twenty and twenty-five, and twenty-one above twenty-five. As the circumstances under which vaccination has been long practised in Copenhagen render it probable, that a very great proportion of those who have had the cow-pox, have had it in infancy, the foregoing facts supply very pointed proofs of a gradual wearing out of its preservative power. Such is the conclusion at which Dr. Mohl necessarily arrives. "I confess," says he, "I am led from these facts to the opinion that the power of vaccination over the human system is in many persons diminished by time; —in many, I say, but not in all, for I have known several persons who were vaccinated twenty years ago and upwards, and who have been repeatedly exposed to the contagion of small-pox without catching it. I can by no means therefore agree with the opinion of Dr. Brown of Musselburgh, who lays it down as a general law, that vaccination never excludes the variolous infection longer than five or six years. For the disposition to variola is not the same in all men; so that a remedy which in one will take away this disposition, will in another extinguish it for ever."

We shall no proceed to consider what light the researches of Dr. Luders and Dr. Mohl have thrown upon the opinion advanced in 1808 by Dr. Thomson respecting the identity of the contagion of small-pox, chicken-pox, and the varioloid disease.

Dr. Mohl is mistaken in supposing that Dr. Thomson's opinion has become the doctrine of the profession in general throughout Britain. On the contrary, is has never been very generally received, and, if we mistake not, has fewer adherents how than it once had. But it is still believed by too many, and is altogether too important in its consequences to be disregarded, when the attention is recalled so forcibly to it as by the works now before us. In considering the subject, we shall first recapitulate the leading evidence brought forward by Dr. Thomson, and by the most formidable of his opponents, the reviewer in this Journal of his work on the varioloid epidemic of Edinburgh, (*April* 1820.)

The leading arguments of Dr. Thomson are, first, that all the cases he had seen of varicella occurred at the same time and in direct connexion with small-pox, sometimes appearing to originate in it, sometimes to produce it;—secondly, that he had never winessed chicken-pox in those whose disposition to variola had been extinguished by an attack of the varioloid disease;—and thirdly, that chicken-pox is very rare among those who have not been vaccinated. To these apparently strong arguments the reviewer answers, that Dr. Thomson disregarded the true characters of chicken-pox as determined by the latest and best authors, and confounded with it the vesicular form of the varioloid disease, which, however, may in most instances be distinguished by a faithful observer:—that doubtless the two diseases sometimes alter their characters so as to approach very near one another, and more rarely alter them so much as to be perhaps undistinguishable:—but, that when the term chicken-pox is restricted to the unequivocal and most frequent variety of it described by Mr. Bryce, then will it be found, first, that by natural infection chicken-pox never gives rise to any thing else but chicken-pox; secondly, that by inoculation it never causes the varioloid disease or small-pox; thirdly, that when it is traced ramifying throughout a family or a district, it reproduces itself in the same form and with the same mildness equally in the inoculated, the vaccinated, and the unprotected; and fourthly, that it reproduces itself as often in its mild form among the unprotected as among the protected, even when it prevails so much as to be accounted epidemical; whereas all the facts hitherto collected show, that when the true varioloid disease prevails epidemically, its form in the unprotected is very often peculiarly malignant.

Returning now to the treatises of Dr. Mohl and Dr. Luders, we find the latter states, in reference to the first argument of the reviewer, that he himself, and ten eminent physicians among his acquaintance in various parts of Germany which had been visited by the varioloid epidemic, never saw true chicken-pox engender small-pox. On the second argument as to the effects of inoculation with varicellar lymph, neither of our authors has brought forward any farther facts. On the third argument, its uniformity and mildness in the vaccinated, the inoculated, and the unprotected, Dr. Mohl remarks, that he has seen "chicken-pox always put on the same form in the unvaccinated as in the vaccinated, which would be extremely unlikely to happen, if both originated in variolous contagion (64);" and Dr. Luders observes, that he has often seen "chicken-pox attack equally those who had gone through small-pox, cow-pox, and *chicken-pox*, as well as those who had not had any of these eruptive diseases,—and without the symptoms being rendered either milder or more severe by the previous disease," (*page* 120.) The fourth argument of the reviewer is of course also confirmed by the statements now quoted.

But our authors have likewise added some new arguments, and one of them of very great importance, as Dr. Thompson, in his account of the Varioloid Epidemic of Edinburgh, has ingeniously admitted that the establishing it would go far to overthrow the doctrine he was endeavouring to set up.

Fifthly, then, Dr. Mohl says he has never seen chicken-pox in families where small-pox prevailed at the same time, or recently before; that he has twice or thrice, indeed, seen in such circumstances an eruption resembling chicken-pox, but never a disease corresponding exactly with its characters as they will be

laid down presently, (p. 65.) Dr. Luders, on the other hand, alleges he has seen chicken-pox produced by the variolous contagion. He is therefore inclined to adopt a modification of Dr. Thompson's views, suggested in 1820 by Lichtenstadt of Breslau,* that varicella was originally produced as an offshoot from variola, gradually weakened by being transmitted and modified through many successive generations; that once produced, it has continued to exist as an independent disease, propagating itself, and incapable of propagating small-pox; and that it may still again arise directly, as in the instances he witnessed, in the manner in which it was originally engendered, (p. 125.) The only facts quoted in support of this doctrine, or rather conjecture, are two solitary instances of the common propagation of variola, varioloid disease, and alleged varicella, after exposure to small-pox contagion. One of these cases appears at first sight exceedingly strong: A member of the family had been exposed to the contagion of unmodified variola; and as soon as the existence of the disease was known, namely, on the ninth day, the family was shut up in their house, and the house, which was situate at a distance from any other, was guarded by a sentinel, and access to it was farther rendered very difficult, in consequence of the roads having been blown up by a snow-storm. The introduction of any other contagion, therefore, besides that of small-pox, was extremely improbable. The apparent force of this fact, however, vanishes at once, when we attend to the description he gives of the eruption, in the case which he relates as one of chicken-pox. The eruption was preceded by fever of three days' duration; it assumed at first the papular form, and it seems not to have become vesicular till the third day after it appeared. We shall presently find that this does not by any means correspond with the description of an unequivocal case of chicken-pox.

Sixthly and lastly, both Dr. Mohl and Dr. Luders have supplied Dr. Thomson with materials for the *experimentum crucis*, which he has himself declared would constitute a criterion, and the sole criterion, of the fallaciousness of his views. "I do not think," says Dr. Thomson, speaking of his hypothesis, "I do not think it can be well set aside, till it shall be proved, that chicken-pox occur generally in persons who have not had small-pox or cow-pox, and prevail epidemically without cases of small-pox occurring among them; but of this I find no unequivocal example in the past records of medicine." (*See this Journal*, xiv. 525.) It is no wonder that the records of medicine should have supplied no such example, seeing how imperfectly chicken-pox was till of late distinguished, and still more how seldom till lately a district of country could be said to be without small-pox. But the political condition of Prussia and Denmark has enabled both of our authors to present Dr. Thomson with examples of the most unequivocal nature. "From the year 1809," says Dr. Mohl, "till 1823, there was absolutely no small-pox in this city, while during that period chicken-pox was observed every year; and on that account there is not a Copenhagen physician who entertains any doubt of the specific difference between the two diseases. Betwixt November 1823 and March 1825, while small-pox raged in Copenhagen, chicken-pox still prevailed sporadically, but without our having ever seen them either arise from variolous contagion, or produce variola. When again the small-pox ceased during the five summer months of 1825, chicken-pox nevertheless continued to occur frequently. Next year, when the small-pox epidemic returned, I had frequent occasion to see chicken-pox, but still always under circumstances, which more and more convinced me, that it originated in a peculiar contagion, quite distinct from small-pox," (page 62.) So also Dr. Luders says—"I have observed it every year in abundance, without small-pox having shown itself in any part of the country for a long period either before or after; and it attacked indiscriminately those who had passed through small-pox, cow-pox, chicken-pox, as well as those who had not gone through any of these disorders, yet without being rendered milder or more severe by the previous disease," (p. 120.)

Taking then into account all the five foregoing arguments,—their direct force, as well as the contradiction they give of the statements on the opposite side of the question, we cannot see any reason for doubting that chicken-pox is specifically distinct from small-pox and its modifications. To Dr. Thomson, however, will still remain the merit of having pointed out the resemblance which the two diseases, by mutual departure from their stricter characters, may bear to one another,—a resemblance so close sometimes, that the most experienced will confound them; and of having consequently turned the attention of physicians to the necessity of a more accurate diagnosis between them.

The observation now made leads us in the last place to consider how the diagnosis between small-pox and chicken-pox is to be drawn, and what additional means have been contributed to that end by Dr. Luders and Dr. Mohl. Whoever has attended to the account given of varicella by Mr. Bryce and Dr. Abercrombie will perceive, that most previous authors had included under that designation some varieties of eruptive disorders, which it is impossible to distinguish from the common forms of modified small-pox. And although many, or rather most cases of the kind may be proved to have been cases of the varioloid disease, it is at least highly probable that some of them have been cases of chicken-pox, but in one or other of its irregular forms, to the occurrence of which it is liable as well as every other exanthematic disorder. In defining the disease, however, the leading place must be assigned to its most frequent and re-

* Hufeland's Journal, June 1820.

gular form; and it is obviously to this form alone that we must confine all observations on its origin, contagious nature and the like, otherwise it is impossible ever to arrive at any certain conclusions.

A great deal of attention has been paid to this subject by Mr. Bryce, Dr. Abercrombie, and the reviewer of Dr. Thomson's work; and the result has been, that, in opposition to the opinion of Dr. Thomson regarding the impossibility of distinguishing chicken-pox from small-pox, or of embodying in words the idea currently entertained of a pure case of the former disease, we are now in possession of a minute and faithful delineation, which no one can be at a loss to apply in practice. Summing up what had been previously written by Mr. Bryce and Dr. Abercrombie, and adding his own observations, the reviewer states, that the proper unmodified chicken-pox is distinguished, first, by the eruptive fever being generally slight, whereas that of modified small-pox is generally sharp, and of several days' duration; secondly, by the eruption being vesicular from the beginning, or at least from an early period of the first day,—not papular, as the vesicular form of the varioloid disease always is for a day or more; thirdly, by the absence of a tubercular basis when the vesicles are fully formed,—the vesicles of chicken-pox being hardly accompanied by any swelling around them, while those of modified small-pox are in the first instance elevated on solid tubercular bases; fourthly, by the great thinness and fragility of the cuticle covering the vesicles. In applying these characters, it is added, two precautions must be be observed: On the one hand the eruption must be seen as early as the second or third day, because at a later period the chicken-pox eruption sometimes acquires a tubercular base, and the varioloid eruption loses it; and on the other hand the judgment must be directed by the general eruption, not by the appearance of a few vesicles differing from the generality.

To these characters others of some consequence have been added by Dr. Mohl and Dr. Luders. Dr. Luders says there is a difference in the seat of the eruption. The varioloid eruption is formed in the true skin, as is shown by the hard, elevated base, which remains after the lymph is removed by puncture and pressure, (*page* 111.) Chicken-pox, on the other hand, is situate in the cellular tissue between the skin and cuticle. This may be perceived, as Mr. Bryce also formerly pointed out, by opening a vesicle, and examining its edge after the lymph has run out; no excavation or elevation will be perceived, but a surface level with the surrounding skin, (*pages* 111 *and* 134.) Notwithstanding the clear and simple diagnosis which this description supplies, it is quite plain that Dr. Luders has repeatedly, as in the instance formerly mentioned, described under the title of varicella cases really of the varioloid disease. Dr. Mohl agrees with Mr. Bryce and Dr. Abercrombie, as to the rapidity with which chicken-pox assumes its proper vesicular structure. He had never been fortunate enough, he says, to see it on the first day; but on the second day he has uniformly found it vesicular. He farther adds another character, not always present, however, namely, itchiness of the eruption. And he has given a minute description of the crusts, which he says are characteristic, being irregular, uneven, opaque, of a pale brownish or yellowish colour, formed of the lymph and collapsed cuticle, and falling off, as Dr. Monro pointed out, not in a single piece like the crusts of variola, but in small fragments.

Dr. Mohl has added some judicious observations on other forms of eruption admitted as varieties of varicella by Dr. Willan, and his own countryman Heim. While he considers that most of the cases of the kind were actually examples of modified small-pox, he seems ready to admit that varicella does sometimes put on a form hardly distinguishable from that disease. Of this hardly a doubt can be ascertained.

We cannot quit this analysis without warmly recommending to the reader both the works we have been noticing. That of Dr. Mohl particularly is perhaps the best epitome that has yet appeared on the subject of small-pox and chicken-pox.

From the Edinburgh Medical and Surgical Journal.

LITHOTRITY AND STONE-DRILLING.

As the exact date and the precise circumstances of the case of Colonel Martin appear to be viewed with doubt by the authors of the Report on the work of M. Civiale, we give the following account, communicated *verbatim* by Dr. Monro from his father's manuscript lectures, in which we have seen the case. This reference proves indisputably that the date of Colonel Martin's operation was not later, whatever sooner, than 1800.

"Before I conclude this subject, it may be worth while to mention the case of an officer of high rank in India, (Colonel Martin,) who persuaded himself that he might be able to rid himself of a stone in his bladder by rasping and cutting it with a file. He accordingly procured a steel sound of the ordinary length and shape, and about one-tenth part of an inch in its diameter, which was made rough like a file on its convex part and sides for the length of three quarters of an inch from its point. He with much courage and perseverance introduced this into the bladder four or five times a-day, filing the stone for half an hour or so each time, and persevered in doing so for nine months. During that time he rasped off a great deal of powder, and cut off a number off small pieces from the stone, several of which he sent me in a letter under cover to the Right Honourable Sir J. Sinclair, along with the instrument he had employed. He was unfortunately seized at the time he wrote me with liver complaint, of which he died soon after, without having destroyed or discharged the whole stone."

"It appears that the stone had been gene-

rally lodged within and grasped by the sphincter of the bladder, in which situation he could reach it and generally file it without its slipping backwards into the cavity of the bladder."*

"Notwithstanding the progress the Colonel had made in his case, I apprehend there are few readers who would think his method should be prosecuted, and still fewer who would have the courage to practise it."

As far as Dr. Monro can recollect these filings were uric acid; consequently the stone was probably hard.

The following letter from Mr. Liston contains an account of the first case in which the operation of stone-drilling has been performed in this country.

Dear Sir—I send you as I promised an account of the case in which I lately performed *lithotritie*. The patient Peter Runciman, æt. 62, applied to me in the end of July last with symptoms of stone, which he had experienced, as he said, for only four or five months. At that time he was sounded, and the operation of lithotomy proposed, but he was very averse to submit to it. I had a few days before returned from Paris, where I witnessed the operations of Dr. Civiale, and had ordered a set of his apparatus for grinding down the stone in the bladder. I had previously obtained the instruments of Lukens, an American, for the same purpose; but until I saw those of Civiale and their application, I confess that I had no very good opinion of the operation.

Runciman's case, from the short duration of the symptoms, appeared to be a very favourable one for the grinding process, and he very willingly agreed to submit, as soon as the apparatus arrived. The duration of the symptoms I say encouraged me to hope that the stone was of no large size; for in the adult it is no easy matter, whatever may be said by system writers, to ascertain by the rectum or otherwise the exact volume of a calculus. Neither is the duration of the painful feelings to be much relied on, as the present case will show. I may also mention, that I have in my collection stones of very small size extracted from patients above twenty, who had laboured under all the symptoms from infancy; and this morning I cut a young gentleman, who has laboured under the disease since ever he can recollect, and removed a calculus not larger than a walnut. The apparatus of Civiale is graduated on the stalk, and is by no means a bad *lithometer*, if I may use the term. But even with it one may be very much deceived as to the size of flat or irregularly formed stones.

Having accustomed the urethra to the presence of the straight sound by two or three introductions of it at intervals of some days, I performed the first operation on the 26th of September. The bladder being previously injected, I passed the instrument without difficulty; and in fact a little practice will enable any surgeon to introduce a perfectly straight instrument into the bladder, with equal facility and as little pain to the patient as a curved one. The stone was at once seized, drilled, slipped, caught, and drilled again, without the patient complaining of any but slight pain. I was not more delighted with the success than the patient, who immediately after walked home, a distance of two miles. The irritation which followed was not great, and was soon subdued by the use of diluents, and camphor and opiate suppositories.

On the 9th October the operation was repeated, and again on the 18th, 27th, and 31st; as also on November 6th, 13th, and 17th, with various success. At these operations, I was honoured by the presence of many of the most eminent medical men of this city. At each sitting the stone was seized and drilled, and generally without difficulty or pain. From the expansion of the instrument in the operation on the 26th of September, I supposed that the stone was about the size of a walnut. On the last, and one or two other trials, I imagined that it was reduced in size, as I had hold of it pretty firmly with the prongs of the litholabe nearly closed. The shape and indented state of the stone accounts satisfactorily for the deception.

On the 22d November, I sounded the patient very carefully, and was satisfied from the rub over the surface, that there was still a large calculus in the bladder. The old man was now impatient, and talked of being cut. To this I was by no means averse, and accordingly performed lithotomy on the 25th. The operation, rendered more tedious from the impressions of the lithotritor on the edges of the stone, was finished satisfactorily in three minutes. The recovery of the patient has been very rapid, which I attribute in a great measure to the use of the tube which I recommended strongly in a former number of your Journal as preventing infiltration of urine, and which I have since then used in above twenty cases with complete success. I may be permitted to remark, that out of all the patients, a considerable number of whom I have performed the operation of lithotomy, both before and since the publication of the paper I allude to, I have never heard one complain of uneasiness in the hypogastric region, and have never but in one instance, where it was more a precautionary measure than otherwise, had occasion to bleed either generally or locally.

I regret much that the period of your publishing will not admit of my furnishing you with a drawing of the calculus removed from Runciman; for no description can convey a correct idea of its size and appearance. But if you wish it I shall provide one for the next number. It is of a flat spheroidal form, much larger than I could have supposed, and composed almost entirely of uric acid. The measurements are in length, two inches and a

* "Colonel Martin had corresponded with Sir J. Sinclair, and sent him a copy of the letter I received, dated Lucknow, September 5, 1800."

quarter, breadth one inch and three quarters, the thickness eight-tenths. The marks of twelve drillings are distinctly visible on different parts of the calculus, many of them very deep. One has passed entirely through, and four others all but through the smallest diameter.

I find on trials with a stone of the same size and shape, that no secure hold can be taken of it but with the flat side towards the drill. In any other position it saps from the chops of the instrument immediately on the drill being set in motion. The result of this case rather confirms than otherwise the favourable impression I lately entertained of lithotrity. Had the calculus in this case, though of an unfavourable shape, been less hard and tenacious, it must have been destroyed by the fourth or fifth operation. I have no doubt but that *lithotritie* in many instances will naturally supercede *lithotomy*, the dangers of which Dr. Civiale in his work very much exaggerates. I shall certainly make further trials of the former operation, and communicate the results to you.—I am, &c.

From the Edinburgh Medical and Surgical Journal.

A CASE OF ELEPHANTIASIS ARABUM, *with remarks.* By Robert Hull, Member of the Royal College of Surgeons.

In the commencement of September, 1820, I saw Maria Carr, aged 32, who laboured under a great enlargement of the right foot. The morbid growth occupied its upper surface, and projected a great deal beyond the toes and laterally. By its weight it had completely extended the foot; the sole was turned quite backward; and the portion of tumour beyond the toes came into contact with the ground when she dropped the limb. A string passed round the tumour and sole measured two feet and a quarter of an inch; round the part projecting beyond the toes two feet five inches and a half; from the bend of the instep to the extremity of the tumour ten inches. The integuments of the swelling and of the leg, nearly as high as the knee, were discoloured, in some parts of an erysipelatous redness, in others ulcerated and scaly; they presented indurations and hollows which, according to the tale of the woman, indicated the sites of former abscesses. The motion of the ankle-joint was destroyed, and habitual flexion of the leg had left but very little to the knee.

The patient stated that thirteen years ago she struck her shin; that ulceration followed; and that ever since some portion or other of the limb had been ulcerated. That seven years ago she *suddenly felt an agonizing pain extending from her knee to the extremities of the toes, accompanied with vomiting and diarrhœa.* That this diarrhœa lasted three weeks, during which she perceived her foot was swollen, but that she forgets how soon after the commencement of the attack the swelling was remarked. She was, if I remember rightly, bed-ridden many days. That the swelling went on to increase, permitting her for two years still to walk, but totally disabling her from the use of the diseased limb for the last five years: that after the tumour had become considerable she suffered at times exquisite pain therein: that occasional hemorrhages from the surface of the swelling were of terrific character. As her health appeared to suffer seriously, I proposed amputation, which was performed in the presence of my friends the late Dr. Alderson, Messrs. Scott, Johnson, and others, above the knee; for although the leg was of its natural size, the morbid state of the integuments rendered its amputation ineligible.

It was performed on the 29th of September; and of the treatment of the stump I have to remark, that I was not permitted to apply a roller, the woman declaring she could not bear the pressure. A projection of the thigh bone was, as I expected, the ultimate consequence. Yet, on the whole, the state of the patient was favourable. She had even walked about her room on crutches, when, on the 16th October, she had a rigour. On the 19th, when I first saw her after the rigour, I remarked much constitutional irritation, with nausea and vomiting, a pulse of 158 strokes in the minute, *the stump covered with an erysipelatous redness*, and the wound, maintained by the projecting thigh bone, discharging a lymph-like fluid. On the 20th, the erysipelatous redness was fading, but the stump was swelled to about one-half as much again as its proper size; it was tender when touched; the granulations had become white, resembling distended vesicles, and the lymph-like fluid was still discharged. 21st, I discovered that the disorder had attacked the *pudenda externa*; and she now confessed that these parts first swelled after a rigour on the 19th. The labia were monstrously enlarged; a tumour, which seemed to occupy the site of the *glans clitoridis*, equalled the ends of two fingers; there was enlargement within the labia; and many tumours, some pediculated, occupied the perinæum and neighbourhood of the anus. The *mons veneris* was very large, and covered with erysipelatous redness, which extended to the groin. The swelling of the *mons veneris*, she said, had existed about four years; and the hair on that region was very scanty and devoid of colour. 22d, I snipped off two of the smaller tumours, when lymph-like fluid exuded from the cut surfaces. She complained of relaxation of the uvula, which excited efforts to vomit. The reader will perceive how curious was this uvular affection, as existing contemporary with that of the genitals. The integuments of the *mons veneris* and groin now assumed the peculiar dusky red colour of the amputated limb. The cuticle on the hands I observed to be in a scurfy state. She had some liquid stools this day, and on the 24th the labial swellings were lessened. 25th, Discharge from the stump duly purulent. 27th, She prognosticated a rigour from "the vapours" which used to precede, and I prescribed a

drachm of laudanum. No rigour occurred. The great constitutional irritation was diminished on the 29th; her pulse beating 96. About this time I thought that I prevented a rigour, by a scruple of the *pulvis jalapæ compositus*, which excited vomiting.

I am now arrived at an interesting stage of this disorder. On the 2d of November the patient voided from the bowels a lymph-like fluid, similar to that which had flowed from the stump, not small in quantity, and containing lumps perfectly white and jelly-like. The excretion was preceded by pain in the bowels. I had said she had not menstruated thirteen years; but she has had at times "a rush" of white or yellow discharge from the vagina, which, by her own account, resembled what now was evacuated from the anus. It resembled also what on dissection of the amputated limb I had found in the cells of the cellular membrane.

Nov. 4th.—She had much hypogastric pain, which was relieved by purgatives; and on the 5th she voided more of the lymph-like fluid.

Nov. 7th.—She passed a small stool, bloody, and preceded by tormina.

8th.—The abdomen was soft, not tender but on extreme pressure; yet all ingesta excited immediate abdominal pain and vomiting. The confection of opium gave some relief; but the lymph-like evacuations still followed each paroxysm of pain.

11th.—Pain, nausea, and vomiting less; the countenance less anxious; pulse 106. On the 16th, an excessive pain attacked the loins, the pulse beating 150; and an erysipelatous eruption like those already noticed appeared on the back and loins. The constitutional irritation and velocity of pulse continued the following days, but on the 20th the erysipelas had faded from the back, and the pulse fallen to 100.

December 1.—She was attacked with dyspnœa, for which a blistering plaster and anodynes were prescribed. On the 2d, the dyspnœa had disappeared, but the pulse was nearly gone, the face Hippocratic, and at four in the morning of the 3d she expired.

Fifty-six hours after death I examined the body.

The right lung was adherent to the costal pleura by long bands; its substance not a little solidified; and about a pint of serum was effused into this cavity of the thorax. The texture of the heart and great vessels was *very* lacerable.

The abdominal viscera were pale externally. Lymph had been effused from the peritoneal coat of the spleen, producing partial adhesion. There was no ulceration in the intestines; no mesenteric disease. There was an abscess of the left ovary; puriform effusion into the uterine cavity; none into the abdomen or pelvis.

I have intentionally reserved to this place an account of the dissection of the leg, which I performed at the time of amputation. The integuments were much thickened; and the bulk of the tumour formed in the subjacent cellular membrane in some places nearly as dense as cartilage, and similar in appearance. The extremity of the *tendo Achillis*, the cellular substance, the annular and lateral ligaments of the ankle, were blended in one confused mass. About a pint and a half of lymph flowed from the cells between the solid tumour and the muscles and tendons of the foot. The ulcers on the leg had affected its muscles, which were moreover pale and attenuated. The bones of the leg were nodose, and the periosteum was easily detachable from their roughened surface. There was deficiency of animal matter in these bones, but the bones of the foot were especially devoid of it. Anchylosis was nearly complete in the ankle-joint.

This case confirms the opinion advanced by Hillary of the impropriety of amputation in this disorder, which is evidently what he termed elephantiasis, and what Hendy called the glandular disease of Barbadoes. From this history it is evident that that the organs concerned in the production of the swelling were the lymphatic vessels alone; for the woman averred she never had enlargement of the inguinal glands, regarded by Hendy as the more immediate agent in this disorder.

This case likewise corroborates the opinion of Hillary, viz. that the accompanying fever in Elephantiasis Arabum is not symptomatic, as Hendy supposed, but rather essential, the swellings being the result of a critical deposition.

The woman Carr affirmed that accessions to the size of the foot were always sudden, and preceded invariably by the febrile symptoms. The train of symptoms which appeared after amputation in her case remind me likewise of a remark by Hillary, who says, "I once saw a patient where this morbid matter was cast upon the scalp, the ears, and the back part of the neck; and another, wherein the matter was cast upon the lower part of the *spina dorsi*, the *os coccygis*, and the lower part of the loins, at each time of the return of the fever, which was attended with all the same symptoms as when it falls upon the leg."

The character of metastasis, or rather of misplacement assumed by the disorder of Carr in consequence of amputation, was witnessed by Hillary to result from another cause. This physician in deprecating blood-letting, says, "it hinders nature from critically discharging the morbid humour upon the leg, and sometimes turns it upon the vital parts, and proves fatal, as I have more than once seen it."

Even Hendy had made observations, which, had not his mind been pre-occupied by theory, would have led him to a truer conception of the disorder. He says, "I have been thrice called to patients, in whom the bowels have been affected. One of these, being at some little distance from town, died before I could possibly reach the place; and another lost his life before my prescription could be made up. The third lived but a short time after I had seen him. They were all free from any complaint, except the glandular disease, and were

all in health a very few hours before I was sent for."

I cannot doubt that by amputation I accelerated the death of this patient. But I was at that time ignorant of the true character of Elephantiasis Arabum. I had not seen Hendy's Treatise, nor was I aware of the experience against surgical interference which Hillary had asserted, who says amputation "has been often performed, but always without removing the disease; for the fever has certainly returned, and the morbid matter has as constantly fallen upon the other leg, and produced the same effects."

On the nosological character of this malady, the name *elephantiasis* has, I believe, led medical men into an error, which is important in proportion to the frequency of the disorder. They confound the Elephantiasis Græcorum with the Elephantiasis of the Arabians; but these had applied the term to what the Greeks appear never to have noticed. The Grecian elephantiasis was the leprosy of the Arabians: the Arabian elephantiasis was that disorder, of which the "Barbadoes leg," the "Cochin leg," of modern writers are forms. The peculiarity of the latter malady is, that the monstrous elephantine swellings are not the concomitants of a cachectic state, slowly developed as in the Arabian leprosy; nor are they engendered like sarcomatous tumours in healthy frames. But they are formed with repeated attacks of smart fever. Upon every attack there is fresh deposit of tumour; and there is every degree of the disorder, from a slight swelling, which may subside entirely, up to the huge masses, which have certainly, in this disease, derived the name from their bulk and ugliness.

This disease is not so rare as most persons imagine. It may be more general in the West and East Indies; but it is frequent even in Ireland, as may be seen in a paper by Dr. Graves in the the recent volume of Dublin Hospital Reports. Dr. Graves does not think his cases are those of true Arabian Elephantiasis. I believe they are specimens of the same affection, of which the symptoms are accurately and convincingly defined in a work very rare in this country, but published in Paris in 1806. I allude to the production of the celebrated M. Alard,—a work which displays much ingenuity, extensive reading, and philosophical research; and which contains the most accurate history of the phenomena, and the most luminous view probably of the pathology of this disease yet extant.*

I had proceeded thus far with my remarks, when I met with the excellent paper of Dr. A. Musgrave "on the Unmixed effects of Mercury on the System."* It is contained in a recent number of this Journal, and is, I believe, the very first publication which announces confidently remedial measures for the remarkable and important malady of which I have been treating. Dr. Musgrave would term it the "migratory inflammation of the lymphatic system." But it has been denominated elephantiasis by so many modern authors, that it is highly desirable to retain the name, provided this can be effected without confounding the disorder with the elephantiasis of the Greek writers on medicine. This may be done by adding the special term *Arabum* to the common designation elephantiasis. There is abundant evidence that the Arabian physicians were acquainted with this lymphatic malady; that they called it elephantiasis; and that the Greeks gave this name to the lepra of the former. Conceiving this disorder to merit more attention than European practitioners have hitherto bestowed upon it—that it is more frequent than is generally believed—that the treatment hitherto published has been nugatory or pernicious—I earnestly recommend Alard's book for communicating a just and comprehensive notion of the disorder, and Dr. Musgrave's paper for its successful treatment. Neither Towne, nor Hillary, nor Hendy, its first describers in the Western Indies, nor Alard, nor others in Europe, present any certain preventive or remedy for the fever. None of them advise, as does Dr. Musgrave, the *mercurial influence*, of which he says, "I remember no case of fatal metastasis after swelling of the gums had been unequivocally observed." For the local and permanent deposition of lymph, when of magnitude, I should entertain little hope of a cure; yet in a case recorded many years ago in the London Medical and Physical Journal, Mr. Ward of Manchester effected absorption of a vast swelling by the employment of pressure by means of adhesive straps.

From the Medico-Chirurgical Review.

PECULIAR DISEASE OF THE HEART.

[M. Breschet. La Charité.]

Our readers will remember that, within the last year, we described three or four cases of a peculiar disease of the heart—one in the person of the late celebrated Talma—another, from our own practice, the case of the late General Kyd; and one by Cruveilhier. The indefatigable Breschet has dedicated a long article to this subject in the last number of the Repertoire, in which he has collected nearly a dozen of instances of this very curious and rare disease. We shall endeavour to seize the more interesting particulars of this paper for the information of our readers.

1. The first case which M. Breschet has been able to find on record, is one related by

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* "Histoire d'une Maladie particulière au Systeme Lymphatique, frequente, quoique meconnue jusqu'a ce jour, par M. Alard."—This was published in 1806, and in 1811 a further account was printed, entitled "Nouvelles Observations recueillies sur l'Elephantiasis des Arabes."

* Vide Monthly Journal of Foreign Medicine for January.

Walter, the father, in the year 1759. The patient was a merchant, 50 years of age, who had, for many years before his death, complained of præcordial anxiety and palpitation of the heart. A pouch was found arising from the left ventricle.

2. After alluding to Dr. Baillie's case, the following is detailed from Zannini, published in 1816. A gondolier, at the age of 19 years, fell and bruised his chest. At the age of 25, he became affected with a complaint of the chest, attended with pain in the side, difficult breathing, cough, and bad expectoration, which symptoms were relieved by bleeding. Soon after this, he felt, for the first time, a pulsation in the *right* side of his chest, attended with a sensation as if a body was moving up and down there. He continued his avocations, and drank much wine. Two years afterwards, he became annoyed with a pain in the region of the heart, which was relieved by bleeding, but continued to return from time to time, especially on using much exertion. He had a disagreeable pulsation at the pit of the stomach. He lived two years in this condition, still pursuing his avocations, when his sufferings were a little mitigated. Having attained the age of 29 years, he suddenly expired one day, while making some corporeal exertion, after eating rather heartily.

On dissection, the lungs were found healthy. The pericardium contained a few ounces of yellow serum. From the left ventricle of the heart there went off a pouch, the size of a man's fist, which was adherent to the pericardium. This tumour opened into the cavity of the ventricle, and contained coagulated blood. The parietes of the aneurismal production varied in thickness, from three quarters of an inch to an inch and a half. There was nothing else particular in the dissection.

3. This was a negro, who was received into La Charité, on the 17th October, 1796, in the agonies of death. He died the next day, after a most profuse nasal hæmorrhage. On dissection, it was observed that the heart was of its natural size; but, from the left ventricle, there went off a tumour, nearly as large as the heart itself. The parietes of this aneurismal tumour were of a cartilaginous consistence, although they preserved the appearance of muscle. The interior of the tumour presented several albuminous layers, of considerable density, exactly resembling those seen in an arterial aneurism, except that they were more pale. The cavity of the tumour communicated, by a rather small aperture, with that of the ventricle. The aneurism appeared evidently to be formed between the muscular substance of the heart and its pericardial covering. The mitral valve was thickened and ossified. This case was recorded in the second edition of Corvisart's work. Laennec never saw an instance of the disease, and only touches on the subject, placing the disease under the head of "Dilatations partielles du Cœur."

4. Two cases of this malady were observed by M. Berard, in the dissecting room of La Charité, and whose histories were, therefore, unknown. The second of these cases offered some remarkable phenomena. The man appeared to have been about 55 years of age, and the body was very fat. On opening the chest, the pericardium presented a most enormous size. The heart was prodigiously dilated, and, at the same time, thickened in its parietes. From the summit of the left ventricle there went off an aneurismal pouch, whose interior was covered with concentric layers of organized coagulable lymph, but not of very long standing apparently.

5. The case which we gave in No. 14 of this Series, page 401, as related by M. Cruveilhier, is next introduced by M. Breschet, and this we shall, of course, pass over.

6. The next instance came under M. Breschet's own observation. On the 27th of March, a soldier, aged 49 years, was received into the clinical ward, stating that he had suffered, for six or eight months, from oppression and want of breath, especially on using exercise. The limbs and belly were now infiltrated—he was unable to lie down in bed—the left ventricle of the heart communicated a considerable impulsion to the cylinder, and each contraction was attended with a whizzing noise, (bruit de soufflet) which was very distinct, but which, however, diminished afterwards, and finally disappeared. The pulse was small, and sometimes unequal. Diuretics, purgatives, &c. were employed, with the view of removing the consecutive dropsical swellings. On the night of the 18th May, the patient suddenly became insensible, and complete hemiplegia of the right side ensued. Bleeding, leeching, &c. were used, but the hemiplegia continued, although some degree of the intellectual functions was restored. He died on the 23d May.

Dissection.—There was serous effusion between the membranes, and in the ventricles of the brain. The right corpus striatum was of a livid colour, and completely softened almost into a fluid. This softening was exactly confined to the corpus striatum, and no other morbid appearance was seen in any part of the brain or cerebellum. The heart was nearly double its natural size, and, from the left ventricle, a small pouch went off, such as has been described. The great size of the heart was occasioned by the dilatation of the left ventricle, whose parietes, however, could hardly be said to be thickened. The tricuspid valve was in a state of induration approaching ossification. The interior of the pouch presented concentric layers of dense fibrine. The liver was granulated.

7. The case of Talma forms the next instance adduced by M. Breschet, but this has been already noticed in our own Journal.

General observations and conclusions.—Our author remarks that the word *aneurism* has given rise to numerous altercations, discussions, and erroneous deductions. By this term have been understood various and essentially different diseases of the heart and of the arteries. It is also remarkable, that we have admitted the existence of certain morbid condi-

tions of the heart which we have denied to the arteries, and *vice versa.* Thus, every one will allow that the chambers of the heart may become dilated, with or without *thickening*—with or without *attenuation* of their parietes; but it has been denied that there can be an aneurism of the heart produced by rupture of the fleshy parietes, and dilatation of its membranous envelopes. In respect to the arteries, it has been contended that there can be no such thing as a true aneurism—that is, a general dilatation of the whole cylinder of the vessel; but that, in all cases, there is a morbid condition of the inner and middle coats, with laceration of these tissues, and the formation of a tumour on one side of the vessel, in which is contained blood, or layer after layer of fibrine. Sennertus, Fab. Hildanus, and Scarpa, maintained this doctrine. But it is too exclusive. There can be no doubt that a diseased condition of the arterial coats, with partial laceration or dilatation of them into a pouch, is the more usual form of aneurism; but to deny that there can be a general dilatation of the caliber of the vessel, without laceration or disease of the coats, is an error. In 14 examinations of aneurismal tumours, Burns found but one in which the doctrine of Scarpa was impugned. Still this one exception in 14 cases proves that the rule is not exclusive. The present paper, and others which we have laid before our readers, evince that the heart is liable to the same kind of disease as the arteries—namely, partial attenuation, rupture, or dilatation of the parietes of some of its chambers, with the consequent formation of a pouch, containing coagulated blood, or layers of fibrine. Observation has proved, that these aneurismal pouches are almost always found to go off from the left ventricle of the heart. What can be the cause of this? M. Portal is of opinion that these pouches may form without any previous disease in the parietes of the chamber. He thinks the disease is more the consequence of violent contraction, than of dilatation of the chamber. There can be no doubt that these pouches are often seen where the rest of the parietes are in a state of hypertrophy; but M. Breschet is of opinion, and we agree with him, that, in all probability, there is an inequality of power in the different parts of the chamber, previously to the formation of these pouches. It is very curious, however, that aneurism by dilatation should be extremely common in the heart, and comparatively rare in the arteries; while, on the other hand, the aneurism by rupture or partial dilatation of the parietes is the usual form of the disease in the arteries, and comparatively rare in the heart. The reason for this difference is not very apparent. M. Breschet has attempted to lay down some symptoms as tending to show the existence of this disease; but we consider them as quite uncertain—if not absolutely erroneous. It rarely falls to the lot of a medical man to see a specimen of this curious disease; but the one which we published—that of General Kyd, was not accompanied by any of those symptoms which M. Breschet mentions—indeed the patient never exhibited any symptoms during life, which indicated organic affection of the heart at all. Still we hold it extremely desirable that we should be acquainted with all the forms of organic disease that may be presented to our view in the course of pathological investigations; and with this view we have presented our readers with a succinct account of our learned author's paper on the above subject. The final conclusions to which M. Breschet comes are the following:—

1mo. The heart is liable to be affected by a disease hitherto undescribed by nosographers or practitioners—2dly. That the disease is chiefly found affecting the left ventricle—3dly. That the *summit* of this ventricle is the principal seat of the disease—4thly. That the tumour is aneurismal.—5thly. That this aneurism, from the mode of its formation, the state of its parietes, and the parts contained in the cyst, may be considered analogous to the "false consecutive aneurism of arteries," in the sense employed by Scarpa—6thly. That the heart is liable to the same kind of aneurism which we commonly meet with in the arteries—a circumstance that might be reasonably expected, from their structure and functions.—*Repertoire.*

From the Medico-Chirurgical Review.

RHEUMATISM—SPINITIS.

M. de M. aged about 50 years, had enjoyed good health till his 48th year, with the exception of a gonorrhœa, followed by the stricture of the urethra. He had never been addicted to intemperance of any kind, though he was fond of good living and the enjoyments of convivial society. Eighteen months before the date of report, he became affected with an intermittent fever, which continued some months, in spite of every treatment, and then disappeared, leaving him rather debilitated.

A second time he was seized with intermittent fever, which resisted the usual means, and Dr. Potain was called in. The fever gave way to leeching the anus, and afterwards the administration of quinine and opium. At this time, he complained of the difficulty in making water, but did not take any remedial measures for that affection. In the summer of 1825, this gentleman was again attacked by the intermittent, which soon gave way to the measures above-mentioned. Two months afterwards, he was suddenly seized with extreme dysuria. Leeches to the perineum—warm baths—lavements—diluents. The dysuria persisted—a catheter was tried to be introduced, but in vain, as the urethra was too irritable. By the soothing means above described, some water was made to pass, and, after a few days, a consultation was had, and the catheter again tried, but the stricture could not be passed. He now repaired to Paris, and was under the care of Dubois and Segalas. The latter applied the caustic bougie,

and re-established the current of urine. The patient returned to St. Germain, (the place of his residence,) where he was soon afterwards seized with rheumatic pains in the upper part of his back, shoulders, and arms. These pains were disregarded for a week, but then became so acute, that he could bear them no longer. Dr. P. visited him, and found him suffering severely, but without any fever. Thirty leeches were applied to the shoulders, succeeded by emollient cataplasms. He was put upon milk and vegetable diet. No relief followed these measures. Two vapour-baths were taken daily for five days, and although they were followed by profuse perspiration, they produced no mitigation of the pains. Every afternoon there was an exasperation of these pains, attended with fever, and preceded by some chilliness. These phenomena led to the quinine and opium once more, but they failed to arrest the disease. Twenty-five leeches were then applied every day for five days, followed by cupping-glasses over the bites. After the third day, the pains ceased entirely in the arms and shoulders, and were considerably diminished in the spine and neck. It was now discovered that, with the exception of the fingers, the upper extremities were paralyzed. Two or three days after this, there was experienced some difficulty in walking, and Dr. P. fearing that the paralysis would become more general, applied a large blister to the spine, and demanded a consultation. The latter was held, and the physician called in, *openly, before the patient, blamed the measures that had been pursued,** and prescribed tonics and nourishing diet. Dr. P. objected to the former, but acquiesced in the latter. This new consultant attributed the gentleman's complaint to "*un vice vénérien,*" although he had not been in the way of any poison of this kind for ten or fifteen years! M. Potain thought, on the contrary, that there was some inflammation about the spinal cord, and that, consequently, the patient's life was in jeopardy. This opinion was not at all participated by his colleague, and the patient determined to put his trust in the latter. M. P. therefore, withdrew. Six days afterwards, M. P. was summoned to meet in consultation, to which were added M. Segalas and M. Dupont. The patient was found incapable of moving himself in bed. The pulse was quick, but the skin was not hot—evacuations could only be procured by injections—and the urine, which contained puriform matters, was obliged to be drawn off by the catheter. In fact, the poor patient was in a state of almost complete paralysis. Messrs. Segalas and Dupont coincided with M. Potain in opinion, and the *liberal consultant* above-mentioned could only be envied, we think, by a man marching solemnly to the new drop. All the measures proposed were resolutely resisted by the *liberal* doctor, and, in 24 more hours, the scene closed.

Dissection.—At this disagreeable part of the business, the liberal did not attend. M. Dupont, however, was witness to the dissection. The spinal column was laid open throughout. From the fifth cervical to the eleventh dorsal vertebra, the membranes of the spinal canal were seen to be intensely inflamed, and covered with a sanguinolent effusion. The membranes were also thickened. The spinal marrow itself was similarly inflamed, and for a similar space. It was also softened in consistence. The time occupied by this tedious dissection prevented an examination of the other parts of the body, as the priests now broke in, and immediately removed the corpse.—*Revue Medicale.*

Remarks.—Two of the members of the Royal Academy of Medicine were ordered to report upon this curious and melancholy case, and the said reporters have learnedly discussed the question, whether the spinal inflammation was owing to the repeated attacks of intermittent fever, or to the rheumatism. They decided that it was to the latter, this phlogosis of the medulla spinalis and its membranes was to be attributed. For our own parts, we do not see any decided proof that either of these maladies was the primary cause of the fatal inflammation above-mentioned; but, of the two, we should be inclined to take the intermittent as the most probable cause. This is the opinion of the original writer of the case, M. Potain. We were not a little surprised to find that no notice was taken by the Academy of the flagrant violation of medical etiquette and common ethics, committed by the second consultant in this case. It was an essential and important part of their duty to animadvert, in the strongest terms of reprehension, on his conduct. Indeed, it is a great pity that there is not some honourable tribunal to appeal to on such occasions. If our colleges and corporate bodies looked to any thing but their own private interests, they would take especial cognizance of all breaches of medical decorum and propriety in the classes of medical society over which they preside—or pretend to preside. But this seems to be no concern of the diplomatic corps. A formal, and often an imperfect examination of the candidate, is all the *trouble* they take—the other part of the ceremony, the reception of the fee, is quite a *pleasure.* The press, however, will probably rouse them from their halcyon slumbers—and the rising gale of public opinion may, perchance, so shake the figtrees under which they placidly repose, as to disturb their—

"Golden visions and romantic dreams."

* It is hardly necessary to express our utter detestation of such a diabolical proceeding as the above. If the consulting physician was certain that the preceding measures were entirely wrong, or even detrimental, he had no right to allow his sentiments to become known in any manner to the patient or friends, unless the first practitioner obstinately refused to hearken to his suggestions.

From the Medico-Chirurgical Review.

PHYSIOLOGICAL AND PATHOLOGICAL RESULTS OF EXTIRPATION OF THE KIDNEYS.

By Professor MAYER, of Bonn.

Passing over the crude speculations of the ancients, respecting the functions of the kidneys, and the rôle which this function occupies in the animal economy—passing over, also, the instances in which these organs were found wanting in fœtuses and in monsters, we shall come at once to modern times, when experiments have been made with care, and their effects accurately noted.

When Richerand extirpated one kidney of an animal, no inconvenience appeared to ensue; but, when both kidneys were removed, a morbid condition obtained, and death took place in a very few days. In all Richerand's experiments, the gall-bladder was found gorged after death. The principal phenomena which succeeded the ablation of both kidneys, were:—Vomiting, tremours, smallness of pulse, urinous odour in the liquids vomited, borborigmi, intermissions of the pulse, coldness of the body—death in three days. On dissection, some effusion was found in the abdomen, but no inflammation—venous system gorged with blood—no alteration in the chest—slight effusion into the cerebral ventricles. In some cases, the animal died in a quarter of an hour after the extirpation, and nearly the same symptoms and *post-mortem* appearances presented themselves.

Prevost and Dumas made similar experiments, and they discovered the presence of urea in the blood, after renal ablation. M. Mayer made a number of experiments, of which he has detailed ten, in a late number of a French journal. We shall only give the results, and not the details.

1. The extirpation of both kidneys causes inevitable death of the animal, at various intervals.

2. The principal phenomena observed, were, tremours; crying, apparently from internal pains; and, finally, convulsions and death.

3. There were no well-marked symptoms of abdominal inflammation.

4. The operation is followed by the secretion, in various organs of the body, of a fluid, having all the physical characters of urine. This secretion takes place, particularly in the abdomen, chest, pericardium, ventricles of the brain, the eye, stomach, and intestinal canal. It even takes place in the cellular tissue of the liver, lungs, muscles, testicles, &c.

This urinous serum was submitted to chemical analysis, and our author's experience coincided with that of Prevost and Dumas, who also detected urea in the blood of animals, after ablation of the kidneys, corresponding with the fact, that men, whose kidneys have been affected with organic disease, have vomited up matters clearly of a urinous character. We cannot, then, says our author, deny, that a urinous liquid may be formed, under the above circumstances, in various other parts, besides the kidneys—but particularly in secreting structures.

Dr. Mayer thinks it probable that the cause of death, after these experiments, is owing to the irritation of the brain, from the urinous fluid thrown out there.—*Journal Complémentaire.*

From the London Medical Gazette.

CURIOUS TUMOUR OF THE HEAD.

Anne Chapman, æt. 55, was admitted November 6th under the care of Mr. Rose.

The patient came to the Hospital from some part of Essex, on account of a large and old bronchocele. On the right side of the head, towards the back part of the parietal bone, there was noticed a tumour of the scalp, about the size of a half-orange; it fluctuated, and yet it was scarcely so tense and elastic as fluid in a shut cavity commonly is. A puncture had been made into it by a gentleman in the country, three weeks previously, and a probe was now introduced into the opening, when some glairy serum issued, mixed with blood, but no pus. This was at two P. M. of the 6th. At one A. M. of the 7th, she was seized with a rigour, which lasted for two hours, and was succeeded by heat of skin, furred tongue, and nausea. The side of the head and tumour became sore, but without redness or swelling, and a lymphatic gland at the back of the neck enlarged, and was very painful.—*Cat. lini tumori h, salin. effervesc. 4tis horis.*

Vesp. Had another rigour in the afternoon. The skin is hot; and there is some headach and confusion. The abdomen is tender on pressure, and the countenance anxious. A quantity of bloody discharge escapes from the tumour, which is more painful.

8th. Has had a restless night, with slight shivering at times; headach; more pain in the tumour, which is swollen, with œdema of the cellular membrane around; countenance anxious; turns from side to side in bed; abdomen tender: no vomiting. A slight erysipelatous blush has appeared upon the bronchocele. Pulse 120, small and indistinct. She cannot be got to swallow any thing. Towards evening she sunk into a semi-comatose state. At four A. M. next morning she died.

Sectio cadaveris. This was performed at half past one P. M. of the same day.

The tumour was soft but still fluctuated. The skull-cap having been removed with the portion of scalp in which the tumour was situated attached to it, there was found to exist an opening in the bone, about the size of a half-crown piece, through which the external tumour communicated with the dura mater. This membrane was sound, rather injected at the part certainly, but not thickened or otherwise diseased. The scalp was then dissected off the tumour, which could be readily done, and an incision made longitudinally into it, disclosing its structure. It

was found to be made up of two or three small cysts, containing serum and coagulum, placed in the centre of a dark, putrid, ragged-looking mass, intermixed with small particles of bone, and in appearance not very unlike the broken-down contents of an aneurismal sac. The tumour passed down, contracted in size, through the opening in the cranium, and expanded below upon the dura mater, to which it adhered, though not very firmly. The brain beneath was perceptibly flattened, but not altered in structure. One appearance was worthy of remark. On the inside of the skull, around the margin of the aperture, there had been thrown up a ridge of new, and very vascular ossific matter forming a kind of *cordon sanitaire* around the disease. It bore an exact analogy to the adhesive process which we see set up around ulcers in soft parts, to confine the disorganization which is taking place. The bronchocele was limited to the right lobe of the gland, and in structure closely resembled that of the tumour in the head. No other particular appearances were observed.

It is to be regretted that no accurate history of this complaint was obtained from the patient prior to the occurrenee of the severe symptoms, when, of course, she was unable to give any. The case was so like encysted tumour of the scalp, that it had been determined on to make an incision into it in the course of a day or two. It is certainly curious, that so formidable a disease should have gone on for a length of time, as this must have done, without producing any very apparent constitutional disturbance. The woman came to the hospital, as was before stated, on account of the bronchocele, and on the house-surgeon noticing the state of the head, she replied, "Oh, sir, that is only a little tumour."

The origin of the morbid growth may admit of discussion; it evidently did not arise from the dura mater, for that was sound. Mr. Rose, Mr. Brodie, and indeed the majority, were of opinion, that it commenced in the diploe of the cranium. There is at present in the hospital another very interesting case of extensive disease of the parietal bone, which we shall take an early opportunity of detailing.—*St. George's Hospital.*

From the London Medical Gazette.

CASE OF DIFFUSED ANEURISM OF THE FEMORAL ARTERY, *in the middle of the Thigh, which was supposed to be an Abscess, and opened.*

A man, seventy-two years of age, was admitted under the care of Mr. Guthrie, on Monday, December 2d, labouring under hemorrhage, which, it was ascertained, arose from a rupture of the femoral artery, there being diffused aneurism of that vessel. In consultation with Mr. White, it was determined, for the reasons we shall afterwards state, to amputate the limb high up above the seat of the tumour. The operation was accordingly performed without delay. For some days the patient went on well, but we regret to state that he died a week after his admission.

Upon examination of the limb, the femoral artery was found to be much diseased at the ruptured part; it was also ulcerated above the opening; and would no doubt very soon have given way at other points. The coats of the vessel were thickened, and had a semi-cartilaginous feel. A considerable quantity of blood had escaped into the surrounding textures. At the part where the limb had been amputated, the size of the artery appeared rather enlarged; but its structure did not present any appearances of disease.

The following account was given by the surgeon who had attended him previous to his admission:—On the 8th November, he had been affected with anasarcous swelling of both legs, the urine being at the same time scanty and high coloured. Under appropriate treatment, the swelling of the extremities diminished; and a few days after he complained of stiffness and tightness about the ham and tendons of the sartorius and gracilis muscles. On the 15th, a slight swelling appeared on the inner and lower part of the thigh, and he complained of great restlessness. Fomentations were applied to the part, and anodynes prescribed. At first the swelling appeared so trifling, as to be taken for the remains of the œdematous affection, which had extended even to the groin. Next day the swelling was more diffused and more painful, particularly on pressure; leeches were applied with some relief. By the 19th, the swelling was still further enlarged; but no pulsation was detected by the surgeon. Is was looked upon as a common phlegmonous tumour, and fomentations and poultices were constantly applied. Under this treatment, the swelling continued to extend. The temperature of the limb was increased, and the patient had a rigour. On the 24th, the attending surgeon, finding the tumour increasing in size, and conceiving that matter had formed beneath the fascia, determined on making an opening into it next day, with the view of ascertaining its nature. We are informed also, that preparations were made to take up the artery if it should be found connected with the tumour. On the 25th, another surgeon saw the patient, and, with his concurrence, an opening was made with an abscess lancet into the centre of the tumour, where the fluctuation was most evident and superficial. The course of the femoral artery was avoided. On withdrawing the lancet, the blade was seen tinged with pus and dark grumous blood. About two ounces of sanious fluid, evidently streaked with matter, was discharged. It was thought necessary to enlarge the incision, and with the view of perfecting the suppurative process, poultices were again applied. For the first five days after the opening of the tumour, nothing but a thin serous discharge took place; but at this time coagula of blood began to escape when the limb was dressed or moved, and this continued at intervals for two or three days. The

case was now deemed alarming, and additional assistance was thought necessary. The patient was put into a coach for the purpose of being removed to the Westminster Hospital, and during this time very serious hemorrhage occurred, and in this state, as before mentioned, he was admitted.

Upon this interesting case Mr. Guthrie made some very important practical observations. After having examined the limb, and explained the nature of the disease to the students, he remarked, that, from the progress of the case and from the age of the patient, he was convinced that disease of the artery existed, and consequently that no operation upon the part where the opening had been made, could have been of any use. If no opening had been made into the swelling, he should have secured the femoral artery in the upper third of the thigh. But under the circumstances of the case, as they existed when he first saw the patient, this mode of practice would have been ineffectual and injudicious, from the danger of hemorrhage from the lower portion of the divided artery. A case had recently occurred in the hospital, where bleeding did take place from the inferior portion of the divided artery, and the patient died. In that instance, Mr. Guthrie had recommended amputation. In the present case also, the only chance that surgical assistance could offer the patient, was by amputating the limb above the aneurismal tumour, and, with the concurrence of Mr. White, the operation had been performed without loss of time. The state of the vessel at and above the part where the rupture had occurred, fully proved the accuracy of the opinion Mr. Guthrie had formed upon his first inspection of the patient.—*West. Hosp.*

From the Lancet.

INTERMITTING PARAPLEGIA, *combined with Amaurosis.* By JOHN ALEXANDER, M. D., Manchester.

The paper upon paraplegia, published in No. 215,* as having been read at a meeting of the London Medical Society, recalls to mind an uncommonly interesting case, of what may be termed *intermitting paraplegia, combined with amaurosis*, which presented itself in one of the clinical wards of the Edinburgh Royal Infirmary, about twelve months ago. I now send you, without further preface, an account of it, as reported in the journals of the hospital, and copied into my case book, together with a few remarks which its peculiarities naturally suggested.

"Dec. 1, 1826.—Jesse Gardiner, æt. 12, of a delicate appearance, admitted first of December, complains of a *loss of sight* in the left eye, unattended with any headach, or other cerebral symptom; pupil very much dilated, but sensibly contractile on the application of a lighted candle, or other strong stimulus to the eye. She has also no power over the lower extremities, being unable to move them, although they are equally warm and sensible to the touch, with any other part of the body. Tongue clean, appetite good, bowels regular. Pulse and heat natural."

The following excellent history of the case, along with the patient, was yesterday transmitted from Perth, by Mr. Cleland, surgeon, resident there.

"Jesse Gardiner has been occasionally under my care, since the autumn of 1822, for a variety of nervous ailments. When I first saw her, the disease exhibited the usual marks of chorea; and as she was rather a delicate looking girl, with weak digestion, tense abdomen, &c. I trusted to purgative treatment, and, for a short time, she appeared to have recovered. The year following, I found her worse than before; the fits were more alarming, and more irregular, both in form and duration. Sometimes they assumed the *appearance of epilepsy*, with total insensibility during the attack, and sleep afterwards, but the face was rarely much distorted; at other times the muscles were quite rigid, and not unfrequently, as if seized with a sort of phrensy, she would *rush out of the house, and run until quite exhausted.* Her eyes became affected; sometimes she appeared to have perfect amaurosis of one eye, sometimes of both, when the pupils are dilated, and hardly moveable on the approach of a brilliant light. Moderate bleeding, either by the arm or leeches, seemed of little use; purgatives were still useful, but less immediately so than at first. In the summer of 1824, a trial was made of Fowler's solution, which proved of no advantage. In the spring following, as there seemed (from headach and suffusion of the conjunctiva) to be considerable determination of blood to the head, a weak solution of tartarised antimony (as a substitute for James's powder, as recommended by Dr. Cheyne) was given, and with considerable temporary relief. I had not seen her for several months, when, in October last, I found her complaining of *inconstant or intermitting paralysis of the legs*, and exceedingly distressed by the frequency of the fits, which assumed now very much the appearance of common fainting. They occurred almost daily, and were generally followed by some obvious change in the other symptoms. Sometimes, after their going off, she was found *completely amaurotic*; at other times, when *amaurotic at the commencement of the attack*, she would after *its termination have recovered her vision*; the same was frequently the *case, with respect to the paralytic affection of the limbs.* Recourse was had again to purgatives, generally croton oil, but to little or no purpose; and, latterly, she has taken thrice a day half a grain of the nitrate of silver in a compound rhubarb pill, seemingly with the effect of lessening, in some degree, the frequency of the fits."

Dr. Duncan, (whose medical acumen, extensive information, and urbanity, are too well known to require the humble tribute of my pen,) desirous to witness some of the pheno-

* Vide Journal of Foreign Medicine for February.

mena of this anomalous complaint, and from the conclusions thence arising, to be directed in his treatment; ordered, in the first place, as a placebo, the friction of a little ointment upon the neck. The day following, we have this report: "Soon after the visit of yesterday, she (Jesse Gardiner) perceived a sensation *indicating the return of power in her limbs*, and, in a moment afterwards, she recovered the power of walking and seeing, which have since remained. Bowels confined." Aloetic pills were administered to remove the constipation, and a pill of the ammoniate of copper directed to be given every night and morning. Suffice it to say, that the latter medicine was continued until the 15th, when she left the hospital, having had no return of those disorders which had troubled her for so many years.

It has long been a disputed point amongst physiologists, whether the iris contracts from sympathy with the retina, or from the impressions made directly upon itself—from the knowledge of its being supplied by different nerves—from the fact of its contracting in the most complete forms of cataract, (when the diameter of the opaque lens has been greater than that of the pupil fully distended,) I had been inclined to think its contraction independent of the retina. This case of Jesse Gardiner's confirmed what had hitherto been matter of opinion, founded upon abstract reasoning alone. When I applied a lighted taper near the eye, the pupil, from the size or diameter of two-thirds of a sixpenee, contracted immediately to the size of a small garden pea. Now, I presume, this could not have happened, provided the action of the iris were not independent of the retina. It may be asked, when you applied the light, was the amaurosis so complete, as to preclude her seeing the taper? It was so, although I freely confess, she had an indistinct perception of something more than usual before the eye; but this perception *was so exceedingly slight*, as not to account, in any satisfactory degree, for the *natural* contraction of the iris, and therefore (in my humble opinion) does not invalidate the argument.

The paraplegia, in this case, was of a very unusual character; it generally produced not merely a loss of motion and diminution of temperature, but of sensibility, with considerable flaccidity and wasting of the muscles of the affected part; no such effects presented themselves in the present anomalous case. I would next remark, that the nerves supplying the voluntary muscles seem to have been those primarily affected; for we are told by Mr. Cleland, that the fits had first the character of chorea, and afterwards of epilepsy, the amaurosis and paraplegia having supervened only twelve months previous to her admission into the hospital; what I would wish to observe on this point is, that perhaps no complaints predispose more, or oftener produce fatuity of intellect, than those of chorea and epilepsy; therefore, it was not a little remarkable, that the intellectual faculties of this girl were left so completely unimpaired, with a four years' illness, characterized by those diseases.

The next feature in this case, is one of great interest to the student of physiology; I allude to the *occasional phrensy inducing her to run out of the house, and proceed until exhausted.* On reference, I find that, from the experiments and observations of Magendie, Rolando of Turin, Fleurens, and Dr. Laurent of Versailles, it is now a pretty well established fact, that certain parts of the brain are destined to urge progressive motion, as well as others to preside over the lateral and rotatary motions of the body. On the integrity of these several parts, and the proper equilibrium being preserved, depends their regularity of function. Magendie found, that an injury of the corpora striata produced the phenomenon present in this girl, viz. the disposition to run forwards; and relates, (what is extremely interesting,) that when the rabbits (his subjects of experiment) had run until they could run no further, they still preserved *the attitude of progression.* M. Rolando regards the cerebellum as the source whence muscular contraction emanates; this able physiologist removed the cerebellum from the crania of several mammalia and birds, and observed that the movements diminished in the ratio of the quantity of substance extracted; this, however, is very objectionable "instantia crucis." Fleurens regards the cerebellum as the *regulator or balance* of animal motion. Lesions of the cerebella of animals have produced an irresistible disposition in those animals to retrograde motion, as instanced by Magendie's well known experiments on the water dog, pigeons, &c.; and Dr. Laurent relates a case of a girl, who, during nervous attacks, is forced to retrograde motion. Allowing to the preceding evidence its due weight, we can easily perceive how an excited condition, (from what cause it matters not,) or a diseased state of particular portions of the brain, may induce the phenomenon Jesse Gardiner presented.

Now, that the syncope could at one time induce, or seem to excite, the amaurosis and paraplegia, whilst, at other times, it was the cause of their intermission, appears rather paradoxical; at all events, any attempts upon my part to explain the circumstance shall be dispensed with, as I conceive it more consistent with the spirit of true philosophy, to admit the existence of causes beyond our comprehension, than to found an argument upon hypotheses, which only demonstrate how repugnant these inexplicable phenomena are to the human mind.

From the Lancet.

ON THE MODUS OPERANDI OF ALOES, AND ITS MEDICAL PROPERTIES. By Dr. Wedekind.

It is well ascertained that the purgative effect of aloes does not take place till eight and sometimes twelve hours after its exhibition. Individuals in whom the secretion of bile is increased with the greatest facility, are those

most powerfully acted upon by aloes. An excitement of the whole system, with quickness of the pulse, disagreeable heat of the abdomen, dryness of the mouth, succeeds the administration of this remedy. These effects are increased when the medicine is continued during several days, and if exhibited in very strong doses, it sometimes gives rise to serious hæmorrhage.

From experiments made on persons in health, and observations on persons in sickness, it has been found that a purgative which acts speedily, as, for instance, a mixture composed of a laxative infusion and sulphate of soda given at one time, with two or four grains of aloes, does not act differently than if exhibited alone. But aloes given two hours before the mixture, does not commence to operate till the effect of the latter has ceased; and the evacuations in second purging differ from those in the first, as well in appearance as in smell. If, on the contrary, the aloes be given from six to eight hours before the mixture, the effects of the two remedies coincide, and the evacuations are generally very copious.

If the stools produced by the aloes are not watery, but bilious, fæculent, and have a specific smell, it is not owing to a special action on the large intestines, as authors have generally stated. The author of this paper had several opportunities of trying this remedy in icterus; and as long as the stools were white or gray, aloes did not purge even when exhibited in large doses; but the purgative effect immediately supervened, as soon as the fæcal matter commenced to contain bile, a proof that the presence of bile in the intestinal canal is a necessary condition of the purgative effect of the aloes. If the aloes were given in too large doses, a bilious diarrhœa generally followed.

It is, then, useless to give aloes with neutral salts, and other salts which act promptly, unless it is desired to promote the secretion of bile; and under such circumstances, the aloes should be given some hours before the other medicine. The pancreatic and hepatic secretions will be still more increased by the addition of calomel.

It appears, then, that the primitive effect of the aloes is on the liver, that this organ is excited by it as the salivary glands are by mercury, or the kidneys by cantharides; that its purgative effect does not depend, as that of many other cathartics, on an increased secretion from the intestinal canal, and an immediate excitement of the muscular fibres of the intestine; but the aloes is first absorbed, then carried into the circulation, and afterwards secreted by the liver, the action of which it increases.

Dr. Wedekind thinks, that the use of aloes is principally indicated when the secretion of bile is scanty, in constipation, from atony of the colon and rectum, and in icterus, which may be attributed to atony of the liver. This medicine should be employed with much caution in irritable persons. In cases of icterus, attended with a spasmodic or inflammatory state of the liver, obstructions of the liver with dropsy, as well as in persons affected with biliary calculi, and those disposed to hæmorrhoids, its use is decidedly improper.

From the Medico-Chirurgical Review.

REPORTS OF MEDICAL CASES, *selected with the View of illustrating the Symptoms and Cure of Diseases, by a Reference to Morbid Anatomy.* By Richard Bright, M. D. F. R. S. &c. Lecturer on the Practice of Medicine, and one of the Physicians to Guy's Hospital.

This is, beyond all comparison, the most splendid production which this country has ever given rise to, in regard to morbid anatomy. The plates of Baillie, Farre, Hooper, Willan, Bateman, &c. &c. shrink into comparative insignificance, as to accuracy of delineation and beauty of execution, when placed along side of those now before us. The task which Dr. Bright has imposed on himself (for this is only the first of a series of volumes,) is truly Herculean, both as respects the labour and the expense. The undertaking is national; for if the author continues "equis passibus," he will not only immortalize himself, but reflect honour on his country—and especially on his own profession. From our government we cannot—or, at all events, we need not expect that any reward, honorary or pecuniary, will flow for such meritorious works as this of Dr. Bright; but we do think that if the *learned heads* of departments in our profession obeyed the dictates of *zealous hearts*, they would hold out encouragement for enterprises like this, by conferring some mark of distinction on those who accomplish them. As the production of a physician, our Royal College, we think, should testify its approbation of such a work, even although emanating from an unfortunate licentiate! It certainly would seem better in the eyes of foreigners to expend a few pounds annually in such a way, than in litigations with the graduates of Scotch universities. We fear, however, that Dr. Bright has little to hope from any other patronage than that of the *public*—a patronage not yet totally swallowed up by the insatiable stomachs of medical monopolists!*

Our author modestly states it as his wish to render, through this publication, the labours of an hospital more permanently useful, by bringing together such facts as seem to throw light upon each other—and, also, to preserve and explain, by faithful engravings, the re-

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* We think that every opulent individual, and every medical society, should make a point of subscribing to Dr. Bright's book, as the proper way to lend their separate and collective aid in rewarding merit, and promoting the publication of valuable works. There will still be a large class who must take the matter at second hand.

cent appearances of those morbid changes of structure which have been connected with the symptoms, or have influenced the treatment of the disease.* He considers it unnecessary, in the present day, to expatiate on the utility of hospital reports, or "the importance of that information which our profession derives from the study of morbid anatomy." Dr. Bright must know, however, that it is not many months since discredit was attempted to be thrown on pathology from "high authority," as it has been called—probably, in reference to the geographical position or *altitude* of the theatre where the *sublime* dogmas were delivered. But we must proceed to the work.

This first volume is divided into several sections, the chief of these exhibiting a collection of cases, with appropriate drawings, of the appearances observable in diseases terminating in dropsical effusion:—*first*, of the appearances in the kidney—*secondly*, of those in the liver—and, *thirdly*, of those in the thoracic viscera. There are some other sections on the effects of inflammation in different textures of the lungs—on phthisis pulmonalis—on jaundice—on dysentery—on fever. All these sections we shall notice seriatim, in this and succeeding numbers of our Journal.

1. *On the Appearances observable in Diseases terminating in Dropsical Effusion.*—These are exceedingly numerous as well as various—and it is often difficult to say how far these changes of structure are the causes, the auxiliaries, or merely the consequences, of the effusion. One great cause is, unquestionably, obstructed circulation, especially in the venous system. Thus, whatever either generally or locally checks the return of blood through that system, as diseases of the heart, the liver, or the lungs, has a strong tendency to produce serous effusion, either in the cavities or in the cellular tissues. But there are many other diseases besides these more obvious ones of the three great organs alluded to, which give rise to dropsy. Certain affections of the peritoneum, as tuberculation, false membranes, &c. give the tendency to effusion, and leave open a considerable field for the investigations of the pathologist.

Dr. Bright, however, has particularly directed his attention to a class of organic changes which have hitherto attracted too little attention—namely, morbid changes in the kidney, which, "whether they are to be considered as the cause of the dropsical effusion, or as the consequence of some other disease, cannot be unimportant." In these conditions of the kidney, Dr. B. has often found the dropsy connected with the secretion of albuminous urine, more or less coagulable by heat. In such cases, the liver did not betray *any considerable* marks of disease, either in its function during life, or structure after death. On the other hand, where the dropsy has clearly depended on organic disease of the liver, there was generally no morbid alteration in the kidney—no coagulable urine. *Dr. B. avers that he has never found the kidneys free from disease in the bodies of those who have died of dropsy, attended with coagulable urine.* Whether this morbid structure, in its incipient state, may be considered as giving rise to the altered secretion—or whether it be owing to the long-continued disorder of the renal function, may admit of some doubt. Dr. B. is of opinion that the altered action of the kidney is the result of various hurtful causes operating through the medium of the stomach and skin, thus deranging the healthy balance of the circulation, or inducing an inflammatory state of the kidney itself—and that a long continuance of this disturbed function leads to permanent change of structure. This, we think, is the more probable solution; and it is, in fact, in accordance with what we see in other organs of the body, as well as in the kidney. Dr. Bright's observations on the condition of the urine in dropsy coincide, in a great degree, with those of Dr. Blackall. We must observe, however, that Dr. Blackall's conclusions have not been borne out by the experiments of others—and especially by those of Dr. Crampton of Dublin, as seen in the Dublin Hospital Reports.

"Where anasarca has come on from exposure to cold, or from some accidental excess, I have in general found the urine to be coagulable by heat. The coagulation is in different degrees: it likewise differs somewhat in its character: most commonly when the urine has been exposed to the heat of a candle in a spoon, before it rises quite to the boiling point it becomes clouded, sometimes simply opalescent, at other times almost milky, beginning at the edges of the spoon and quickly meeting in the middle. In a short time the coagulating particles break up into a flocculent or a curdled form, and the quantity of this flocculent matter varies from a quantity scarcely perceptible floating in the fluid, to so much as converts the whole into the appearance of curdled milk. Sometimes it rises to the surface in the form of a fine scum, which still remains after the boiled fluid has completely cooled. There is another form of coagulable urine, which in my experience has been much more rare; when the urine on being exposed to heat assumes a gelatinous appearance, as if

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* In passing a high encomium on Dr. Bright's plates, we do not mean to say that they are faultless, or that they are equally meritorious. Those representing diseases of the kidney we consider as the best—and those of the lungs the worst. We think it quite impossible that any portion of lung in phthisis pulmonalis could *faithfully* present all the most brilliant colours of the rainbow, as seen in plates IX. and X. The same observation would possibly apply to some plates of morbid conditions of the intestines. The second figure in plate XII. we cannot but think is meretriciously set forth, and as—"flounting in rags, or fluttering in brocade." The principal, perhaps the whole failing in these beautiful plates, is their *excess of beauty*.

a certain quantity of isinglass had been dissolved in water. I have indeed met with this in one or two cases only." 3.

In the progress of these anasarcous cases, Dr. B. has generally found a strong tendency to throw of the red particles of the blood by the kidneys, in the form of hæmaturia, varying from the simple dingy colour of the urine, with slight brown deposit, to complete bloody urine, with, occasionally, a thick ropy deposition at the bottom of the pot.

"Besides these cases of sudden anasarcous swelling being generally accompanied by coagulable urine, I have found another and apparently a very opposite state of the system prone to a secretion of the same character; namely, in persons who have been long the subjects of anasarca recurring again and again, worn out and cachectic in their whole frame and appearance, and usually persons addicted to an irregular life and to the use of spirituous liquors. In these cases the albuminous matter has coagulated, in the more ordinary way, in flakes and little curdled clots; but, instead of rendering the whole milky, the flocculi often incline to a brown colour, looking like the finest particles of bran, more or less thickly disseminated throughout the heated urine. Occasionally in these cases the urine has been much loaded with saline ingredients becoming turbid by standing, but rendered quite clear by the application of a much lower degree of heat, than is necessary to coagulate the albumen.

"In all the cases in which I have observed the albuminous urine, it has appeared to me that the kidney has itself acted a more important part, and has been more deranged, both functionally and organically, than has generally been imagined. In the latter class of cases I have always found the kidney decidedly disorganized. In the former, when very recent, I have found the kidney gorged with blood. And in mixed cases, where the attack was recent, although apparently the foundation has been laid for it in a course of intemperance, I have found the kidney likewise disorganized." 4.

Dr. Bright now proceeds to the detail of cases, some of which we shall introduce, under a very abridged form.

Case 1.—A sailor, aged 34, who, like most sailors, had made free with the grog-bottle, entered Guy's Hospital on the 12th October, 1825. He stated that, for the four last years, he had left the sea, and with it the habit of ingurgitation. He was of a pale, unhealthy aspect. Three weeks before admission, he was seized with pains in his loins, knees and ankles —his legs swelled, and his hands and face were occasionally œdematous. His abdomen, on admission, was painful on pressure—pulse 78—tongue pale—fæces light coloured—urine scanty, a pint in the 24 hours—appetite good. A pill, containing mercury, squill, and opium, was administered every night, and, during the next five days, he improved, in respect to the urinary secretion; but the œdema was little reduced, and he could not lie easy in bed without being highly propped up. On the 20th of the same month, he was attacked with general inflammatory symptoms in the thorax and abdomen, for which he was bled—had fomentations applied—and took effervescing draughts, with ipecacuan wine. The blood was inflamed. The symptoms returned the next evening, with herpes labialis on the face —and some blood had passed in his motions. The urine, however, was more in quantity, and less sedimentous. On the 25th, the urine was much more free, and it had assumed the dingy brown colour, marking an admixture of red particles of blood. He continued to improve, but complained of *pain and weakness in his loins.* He lies down easily, but his legs continue to swell—tenderness of abdomen gone—urine in good quantity, and clear, but *coagulates by heat.* 27th. Gums sore from mercury. By the 2d Nov. he was so much improved as to be able to walk about the ward, and was only taking a grain of ipecacuan thrice a day for his bowels. On the evening of the 10th Nov. Mr. Stocker was suddenly called to him for an attack of dyspnœa, with symptoms of thoracic inflammation. *Venesect. ad* ℥x.—*blister.* He was somewhat relieved—the blood was inflamed—but he was quite unable to lie down. The urine again became scanty—and the dyspnœa was increasing. *Squill pill and mercury—venesectio—another blister.* We deem it unnecessary to pursue the diurnal details. The symptoms of thoracic and anasarcous effusion increased, together with the dyspnœa, emaciation, and general prostration. He died on the 29th November.*

Dissection. The pericardium contained about four ounces of clear water, which soon became gelatinous. Both portions of pericardium showed strong marks of inflammation, in the shape of fibrinous deposits, some of recent formation, others of longer standing. The heart was large and firm. The semilunar valves of the aorta showed ossification. The left lung was every where adherent, and every where converted into "*gray hepatization,*" very few portions admitting air. "The right lung was soft, and in structure not unnatural, but œdematous; filled by the effusion of se-

* We see no mention made of auscultation or percussion till the day of this man's death, when the right side of the chest was found to be more sonorous than the left; and, by the assistance of the stethoscope, Dr. B. thought he could hear the heart beat through a fluid. In all cases where thoracic affections are present, the stethoscope should be employed, for we can assure those who cultivate that instrument, that it will require years of study and practice, to make themselves even imperfectly acquainted with the indications which it points out. The dissection of the above case will show that auscultation, properly employed, would have detected irremediable organic disease in the chest *for months* before the man died.

rum, so that the fluid ran out, mixed with innumerable fine bubbles of air, immediately it was cut into. The whole cavity of the chest, on this side, was filled with serum, but the lung not compressed by it." There was some serous effusion in the abdomen. The peritoneal coat of the liver was coated with a fibrinous deposit, not very recent. No obvious disease in the size or structure of this organ, except that it was "rather pale coloured, of a purplish drab throughout, and not of firm consistence." The kidneys were completely granulated throughout, as seen in plate I. with rough external surface, while all traces of natural organization were gone from within, except in the tubular parts, which were of a lighter and more pinky colour than natural.

Remarks. Dr. B. thinks that, if we can form any judgment as to the comparative priority of diseased structure in this patient, we should be inclined to give that priority to the disease in the kidney, which "had probably laid the foundation for that effusion into the cellular membrane, which had taken place previously to his admission." Dr. B. observes that there was no evidence whatever of organic disease in the liver, anterior to the patient's reception into the hospital—and that it is not at all improbable, that "the greater part of the mischief done to the substance of the left lung, had taken place between the 20th October, when he suffered the severe inflammatory attack, and the 29th November, when he died." The serous effusion was, no doubt, a recent affection.

We are aware that Dr. Bright has the authority of Laennec for the sudden formation of hepatization in the lungs—even the *gray hepatization*, which is the third degree of that disease. With all due deference to M. Laennec, we conceive that, on this point, he may be mistaken. But, granting that hepatization of the lung may take place, say in ten or twenty days, from peripneumony, every pathologist knows that this same hepatization may continue for months or years, without affecting life. And, when we contemplate the state of the above patient when he first came into the hospital, we can have little doubt that hepatization of the lung existed there, and for a very long time before. It is not, therefore, very easy to say, with certainty, that the disorganization of the kidney preceded the hepatization of the lung—and it is still more problematical, that the kidney affection was the cause of the dropsical effusion in the chest. There can be no doubt, however, that the thoracic effusion, especially the inflammation and affection about the heart, was the immediate cause of the fatal termination.

Case 2.—Eliz. Beaver, aged 37, was admitted on the 23d Nov. 1825, with swelling and fluctuation of the abdomen, attended, also, with tympanitis. The lower extremities, and the parietes of the abdomen were œdematous, with erythema about the ankles. Her face and arms had also swelled occasionally. Severe cough was excited by a deep inspiration, causing, also, some abdominal pain. Her breathing was short—inability to lie horizontally—bad sleep—pulse 112—tongue furred in the middle, and clean at the sides—bowels relaxed—urine clear, but uncertain in quantity. She had been ill about six months, her illness commencing with pain in the chest and increase of cough, to which last she had been subject for four or five years. The catamenia had stopped five months previously. On account of the diarrhœa, confectio opii, and hyd. cum creta, were ordered thrice a day, with some other cordial medicines. 24th. Much the same. On the 25th, the urine was examined, and found to *coagulate by heat.* It was scanty in quantity. She gradually got weaker, and died on the 29th of the same month.

Dissection. There was some effusion into both sides of the chest—body generally anasarcous—lungs tolerably healthy—heart small in size, and feeble in texture, the parietes of the right ventricle being in a state of atrophy—an ounce and a half of water in the pericardium. There was much straw-coloured fluid in the abdomen. The liver, externally, appeared granulated, but this appearance was very much confined to the surface. The kidneys were both of unusual size, and, on external view, they were obviously granulated with yellow matters. The whole of the cortical structure appeared converted into a yellow substance, resembling fat. There was nothing else particular in the dissection.

Remarks. Dr. B. thinks we may attribute the dropsy with coagulable urine, in this case, to the disorganization in the kidneys. He seems to doubt whether the state of the heart and liver had any thing to do with the dropsical effusions. There will be some who may doubt this exclusive blame on the kidneys.

In the following cases we shall be more brief in our analysis.

Case 3.—A female, aged 25, of previous intemperate habits, was admitted Nov. 8th, with anasarcous swelling of the legs, diarrhœa, cough, dyspnœa, bloated and lived face. *The urine was found to coagulate very considerably by heat.* She died on the 12th of January following, after an unsuccessful exhibition of various remedies.

Dissection. Nearly two pints of turbid serum in the left side of the chest—lung of that side œdematous and rather fleshy at the summit, with some incipient tuberculation. In the *right* side, there was, also, considerable effusion, and the lung was very much condensed, so that but a small portion admitted air. A thick adventitious membrane surrounded the greater part of it, and it was firmly glued to the pleura. The apex of the right lung was completely tuberculated, with some excavations. The liver was pale, yellowish, rather firm, and inclined to granulation. Ulcerations near the valve of the colon, in the ileum. The kidneys were entirely disorganized. The whole of the cortical substance was of a uniform yellow colour. This state of kidney is beautifully delineated in the second plate.

Case. 4.—A bricklayer, not of intemperate habits, was admitted on the 22d November. Two months previously, having heated himself much in working, he drank cold beer and lay down on the damp grass. His legs began to swell in a day or two afterwards. At the time of admission, he was generally anasarcous, and his legs were greatly swollen, with symptoms of effusion into the cavities. His breathing was much oppressed. Squill pill and mercury, with some other diuretics, were given, with temporary improvement only. His urine was scanty, and *coagulated by heat.* On the 12th December, a diarrhœa, with erysipelas of one leg, came on, and he died on the 16th of the same month.

Dissection.—Three pints of clear yellow serum in the *right* side of the chest—lung on that side slightly puckered and hardened at the apex. In the *left* side, there was about a pint and a half of serum—left lung healthy. In the right lobe of the liver there was a small collection of tubercular bodies, and a similar collection in the small lobe. "The whole substance of the liver was nearly in a healthy state—a little inclined to be granulated." The cortical structure of the kidneys exhibited the commencement of granulation. They were rather large and soft—general colour pale, and, on stripping off their tunic, the whole surface was seen speckled with minute yellow bodies, which bodies were found pervading the whole cortical substance. These kidneys are delineated in plate the third.

Dr. Bright anticipated this state of kindney before death, and committed the diagnosis to writing.

Case 5.—A stout looking sailor, aged 34, was admitted on the 29th November. Denied having been intemperate, only taking a good deal of spirits and water. Three years previously, he caught a bad cold, and has never been well since. Five months ago, he began to swell, and his legs and thighs are now decidedly œdematous. The urine is scanty, and *coagulates into a complete gelatinous mass by heat.* Mercury and squills were given, and the urine increased, becoming less coagulable. On the 22d December, dysenteric symptoms came on, and lasted a few days. On the 12th February, we find the urine very scanty, and strongly coagulable. He was evidently declining fast; and now, for the first time, it is stated that "his cough is more troublesome, the expectoration puriform, and, for some days, there have been symptoms of inflammatory affection in the chest." He died on the 14th February.

Dissection.—Œdema of the lower extremities—considerable effusion into the left cavity of the chest—with flakes of coagulable lymph and other products of inflammation. The lung more firm and red than natural. Nothing wrong in the other side of the chest—heart rather flaccid—liver pale, "inclined to granulation in its appearance, but not enlarged, nor materially firmer than natural." Unequivocal evidences of peritoneal inflammation were observable, with considerable effusion. The kidneys were large—very dark on their upper surface, and mottled with yellow on their under surface. Internally, the structure had changed to a fatty substance, with some traces of granulation.

The foregoing half dozen of cases out of 25 put on record by Dr. Bright, will be sufficient specimens for this analysis; and we shall, therefore, proceed to give some account of our author's "general observations" appended to the narrative of facts.

From the facts which have come under Dr. B.'s notice, he thinks he is authorized to establish three varieties, if not three completely separate forms, of diseased structure in the kidneys—generally attended by a decidedly albuminous character in the urine.

"In the *first*, a state of degeneracy seems to exist, which from its appearance might be regarded as marking little more than simple debility of the organ. In this case the kidney loses its usual firmness, becomes of a yellow mottled appearance externally; and when a section is made, nearly the same yellow colour slightly tinged with gray is seen to pervade the whole of the cortical part, and the tubular portions are of a lighter colour than natural. The size of the kidney is not materially altered, nor is there any obvious morbid deposit to be discovered. (Plate II. Fig. 4.) This state of the organ is sometimes connected with a cachectic condition of body, attended with chronic disease, where no dropsical effusion has taken place either into the cellular membrane or into the cavities of the body; I have found it in a case of diarrhœa and phthisis, and in a case of ovarian tumour. In the former it was connected with slight and almost doubtful coagulation of the urine by heat; in the latter I had omitted to examine the state of the urine. I also met with nearly the same condition of the kidney, with some opaque yellow deposits interspersed through the structure, in the case of a man who died exhausted with diarrhœa brought on by hardships and intemperance, and in whose case the secretion of urine was very deficient, but whether coagulable or not I had no opportunity of ascertaining. When this disease has gone to its utmost, it has appeared to terminate by producing a more decided alteration in the structure; some portions becoming consolidated, so as to admit of very partial circulation; in which state the surface has assumed a somewhat tuberculated appearance, the gentle projections of which were paler than the rest, and scarcely received any of the injection which was thrown in by the arteries. (Plate II. Fig. 1. 2. and 3.) In this more advanced stage, if it be the same disease, dropsy has existed, and the urine has been coagulable." 67.

The *second* form, is that in which the whole cortical part is converted into a granulated texture, and where there appears to be a copious morbid interstitial deposit of an opaque white substance. In the early stage, when the tunic is taken off, there is exhibited only an increase of the natural fine mottled appearance given by the healthy structure of the kidney. On slitting the organ longitudinally,

a slight appearance of the same kind is discovered internally, and the kidney is deficient in its natural firmness. In time, the deposited matter becomes more abundant, and is seen in numerous specks of no definite form, thickly strewed on the surface. Internally, these specks are found distributed in a more or less regular manner throughout the whole cortical substance, no longer presenting a doubtful appearance, but manifest to the eye without any preparation. At a still more advanced period, the granulated texture begins to show itself externally, in slight uneven projections on the surface of the kidney, very apparent through the tunic. The organ is generally larger than natural, sometimes not at all increased in size.

"The *third* form of disease, is where the kidney is quite rough and scabrous to the touch externally, and is seen to rise in numerous projections not much exceeding a large pin's head, yellow, red, and purplish. The form of the kidney is often inclined to be lobulated, the feel is hard, and on making an incision the texture is found approaching to semicartilaginous firmness, giving great resistance to the knife. The tubular portions are observed to be drawn near to the surface of the kidney: it appears in short like a contraction of every part of the organ, with less interstitial deposit than in the last variety. This form of disease existed in a case from which I had a drawing executed about three years ago, it also existed in Bonham, (p. 22); and a most decidedly marked instance of it may be found in Stewart, (Plate III. Fig. 1 and 2,) where however the kidney was of a lighter colour than in the other cases, which were more of a purplish gray tinge. I believe the case of Smith, (p. 23,) belonged to the same. In most of these cases the urine has been highly coagulable by heat, at times forming a large curdled deposit, though in one case (Castles) where an approach to this appearance was found on the outside of the kidney, but with marked structural change in the liver, and with confirmed bronchial congestion, only a dense bran-like deposit of a brown colour was produced by the application of heat." 69.

Although Dr. B. hazards a conjecture as to the existence of these three different forms, he is by no means confident as to the correctness of this view. So much for the descriptive part. We now come to—

Observations on the Treatment.—It has been our author's object, in all that precedes, to prove that certain dropsical affections depend more on derangement of the kidneys themselves, than has generally been supposed—and that the particular cases in which these organs are the seat of disease, are pointed out by the albuminous nature of the urine. The author wishes he could add any thing very satisfactory as to the treatment. But he is inclined to doubt whether it be possible to effect a cure, or even afford much relief after the decided organic change has taken a firm hold on the kidney. In sudden attacks of anasarca from intemperance and exposure, in the early stage, and before organic changes have taken place, we have *first* to restore the healthy action of the kidney—and, *secondly*, to guard against those dangerous secondary consequences which may destroy the patient at any period of the disease. Inflammatory affections, especially of the serous membranes, and serous or sanguineous effusions on the brain, are the two principal sources of danger. Thus, out of seventeen dissections, they found ten or eleven betraying pleural inflammation, ancient or recent—five of pericardial phlogosis, (three recent, two old,) and only one where peritoneal inflammation was well marked. In respect to cerebral affections supervening on renal disease, the cases recorded by our author present both apoplexy and epilepsy. The treatment must, therefore, bear on the prevention of these impending dangers, and active depletion, in the early stages, is indispensably necessary. When symptoms indicative of the presence of these imflammatory affections appear, there can no longer be a doubt as to the free abstraction of blood. Practitioners should bear in mind that, in these complaints, the thoracic imflammations are extremely insidious, and are often masked by the hydropic phenomena. "And we are led to ascribe many of the symptoms—such as the slight cough, the dyspnœa, and the difficulty of lying down—to effusion rather than inflammation." We are sorry to hear such observations from Dr. Bright, at a period when effusion in the chest may be very readily distinguished from inflammation of the lungs or pleura, by even tyros in auscultation.

When the inflammatory attack comes on early in the disease, it is often overcome by free depletion; but in the more advanced stages, the patient bears depletion so ill as to check the depletory measures. But bleeding is also an important remedy for the restoration of healthy action in the kidneys themselves. The foundation of future disorganization is probably laid in a previous state of slow inflammation or congestion. General blood-letting was useful in many cases—in others, local depletion from the loins had a better effect.

Purgatives, especially the saline laxatives combining diuretic powers, are decidedly beneficial. The supertartrate of potash was found very useful in our author's hands. He gave it in a fully saturated solution—a large draught early in the morning. The next diuretic which Dr. B. has been in the habit of employing, was squill, in its various preparations—especially when combined with hyosciamus or opium. Digitalis, where the pulse was sharp, seemed adapted to the complaint. When the inflammatory stage had subsided, Dr. B. thought he saw advantage derived from turpentine and Peruvian balsam.

In respect to the employment of mercury in this class of diseases, Dr. Bright seems to be of opinion that it is injurious, rather than advantageous; although it is consistent with good and successful practice in most other inflammations to avail ourselves of the valuable combination of calomel and opium. Still Dr. B. appears to be in doubt upon this subject. He

observes, however, that the sphere of mercurial practice, in these diseases, is very much limited, on account of the rapidity with which ptyalism comes on, and the difficulty of restraining it afterwards. When the cellular membrane is anasarcous, from renal disorganization, the gums and cheeks are not capable of supporting the process of ulceration, and often pass into a state of gangrene.

"Where, as in a case to which I have only referred, we have a flaccid, watery and dissolved state of the kidney, I can point out no diagnostic symptoms by which it can be discovered, except such as show general debility of circulation and feebleness in the structure of the heart; for probably the feeble condition of the two organs may often be found co-existent. If this be the case, it is not improbable that tonics will be the most appropriate remedies. In one or two cases of anasarca which I have lately had under my care, where from the feeble but extensive beat of the heart I was led to suppose that a feeble state of that organ existed, a combination of sulphate of quinine with squill, effectually restored the patient. And occasionally we find anasarca even with coagulable urine so marked by debility, that tonics and steel give decided relief; probably it is as a tonic that the uva ursi is sometimes useful." 74.

II. *Chemical properties of the Urine.*—Dr. Bostock has favoured the author with a letter on this subject, from which we shall extract some particulars. In the greater number of specimens of urine examined by Dr. Bostock, as passed by the patients whose cases are narrated, the quantity of matter dissolved or suspended was below the average of healthy urine. Dr. B.'s experiments induce him to conclude, that these specimens of urine were not only deficient in some of the natural constituents, but contained a quantity of extraneous matters. The coagulability of the dropsical urine, Dr. Bostock attributes to the presence of albumen; but thinks that this proximate principle is modified or altered, in some cases of the disease under consideration.

Here Dr. B. trenches a little on the pathological physician's province. He observes that the presence of albumen is commonly considered a morbid phenomenon, and a pathognomonic symptom of a certain state of the constitution, or, indeed, of a specific disease. If the albumen be in a state coagulable by heat, the first position may be true; "but it must be admitted, on the other hand, that an albuminous state of the urine is produced by such a variety of circumstances, and many of them of so trifling a nature, as to render it almost a constant occurrence." In his own person, he has hardly ever found the urine entirely free from albumen, and he observed it to be increased to a considerable amount by the slightest causes.

This brings our analysis of the first part of Dr. Bright's work, occupying 88 quarto pages, to a close. In our next number, we shall pursue our analysis, so as to make our readers as well acquainted with the work as can be done through the medium of a journal, and without the assistance of the plates. We strenuously recommend again this very meritorious production to the patronage of the affluent members of our profession, and think that no medical society or association should be without it.

From the London Medical Gazette.

MEDICO-CHIRURGICAL TRANSACTIONS.

On Paraplegia.

Mr. Earle, whose attention has long been directed to the subject, has contributed to the present volume an elaborate and interesting paper on paraplegia. By this term, he understands "that species of palsy in which both sides of the body are affected, in contra-distinction to hemiplegia, where only one side is deprived of sensation or motion, or both."

The most interesting question with regard to paraplegia, is, whether it does or does not occasionally arise from morbid changes within the encephalon, without any disease of the vertebral column. Mr. Earle thinks that it does, and that the symptoms of this form of the disease are such as may frequently enable us to detect it during life. He states, that "the gait of persons suffering from cerebral affection is peculiar, and very different from that attendant on affections of the spine. It very nearly resembles the vacillating steps of a drunkard.—Such paralytic persons are incapable of walking in a direct line; the limbs loose, and thrown forward with an exertion of the whole body; there is a great consciousness of feebleness in walking, and the greatest difficulty in turning round. The appearance of the eyes often much resembles those of a drunkard, particularly when the patient is at all excited or anxious. The above analogy to the staggering steps of intoxication is readily understood, if we consider that it is the temporary disturbance of the brain, from the congestion of its blood-vessels, that deprives the drunkard of the power of directing his steps, and for the time induces a state bearing the closest resemblance to paraplegia.

"Sensation is more impaired than in spinal affections, when it will often remain perfect after a total loss of the locomotive powers. This impaired sensation is often peculiar, imparting an idea of some foreign body, as a leather glove or stocking being interposed. The patient appears to feel, if I may use the expression, through a false medium; the limbs are more wasted and flabby, without any spasmodic rigidity of the muscles, which so often occurs in affections of the spine. Although often accompanied with a torpid state of the bowels, aggravated no doubt by the impaired muscular power of the abdominal parietes, there has not, in any instance that I have witnessed, been any train of gastric symptoms similar to those which so constantly attend affections of the spine, especially of the dorsal region. In some instances there is the additional confirmation of an impaired

state of some of the external senses, accompanied with vertigo, a sense of weight on the head, and a general disturbance of the cerebral functions. As disease advances, the power of the brain in transmitting its influence to the extremities becomes more and more circumscribed."

When the disease has proceeded to the extent above described, the mental faculties become more or less impaired, and then, our author thinks, no reasonable doubt can exist with regard to the disease being in the brain. In slighter cases, however, and where the diagnosis is, therefore, more difficult, Mr. Earle gives the following directions, as calculated to afford material assistance:

"It is well known that when a nerve is stimulated or injured in any part of its course, the painful sensation is referred by the percipient mind to the sentient extremity of such nerve: the familiar instance of the pain referred to the extremity of an amputated limb, may be adduced in proof of this. The exact reverse of this takes place when there is a partial paralysis arising from morbid affection of the cerebral organs. Here the centre of the sensorial functions being impaired, it appears to be incapable of transmitting its influence to the extreme parts of the body, and thus the feet and hands gradually lose their sensation or power of motion, or both: and in such cases, if the nerves supplying the limbs be irritated, *they will convey the impression of such injury only part of the distance down the limb, about as far as the commencement of the paralytic affection.* I have repeatedly examined cases of paraplegia from affection of the spine, and in no one instance have met with the same phenomenon, which I have, therefore, been induced to consider as diagnostic of the paralytic affection being dependent on disease of the brane or its membranes; which opinion has in several instances been confirmed by examinations after death, in which both brain and spinal marrow have been carefully investigated."

Mr. Earle, after a few observations on curvature of the spine, proceeds to relate some cases: and these consist—1st, of paraplegia, dependent on cerebral affection alone;—2dly, of paralysis, from disease of the spine;—and, 3dly, of cases in which there was disease both in the brain and vertebral column.

A gentleman suffered from symptoms about the head and paraplegia. On examination after death, the vessels of the dura and pia mater were found very turgid, the convolutions flattened, and five ounces of serum in the ventricles; a thick layer of lymph on the pons varolii and optic nerves; the whole pia mater studded with small tubercles, particularly at the base of the brain. The cervical portion of the spinal cord exhibited no appearance of disease, except a slight increase of fluid in the theca, which Mr. Earle conjectures might have flowed down during the dissection. This, however, might, or might not have been the case; and as the lower part of the spinal marrow was not examined, we cannot admit this instance as proving our author's position. It shows that there was disease in the brain, but not that there was no disease in the spinal cord.

A young woman had the menses suddenly suppressed, in consequence of which the sensibility of the hands became impaired, while they retained their muscular power. At the end of between two and three years she died apoplectic. Much gelatinous deposit was found towards the basis of the cranium; three scrofulous tubercles in the cerebrum, and one in the cerebellum, which last had suppurated. The cancellous stricture of the bodies of the vertebræ was filled with a cheesy deposit, and they were so soft that they could be cut with the knife:—no perceptible change in the spinal cord or its membranes.

The next case is very interesting, and shows the propriety of steady perseverance in proper means, even under the most discouraging circumstances.

Major L., an active man, aged 38, was thrown from his horse, in November, 1824; he fell flat on his back on a hard road, was somewhat stunned, but soon got up, "shook himself," and rode on. No precautions of any kindwere taken, and in six weeks after, (having been exposed to cold,) he felt some difficulty of swallowing, and could not close his teeth with sufficient force to chew tender meat. These symptoms came on, January 18, 1825, and gradually increased, being attended with a thickness in his articulation; and, on the 23d, with numbness of the feet, and weakness of the legs. The whole of the lower half of the body soon became paralysed, and his arms began to be affected, so that he was unable to grasp any thing. On the 3d of February, Mr. Earle first saw him, when he was in the following state:—

"His lower extremities were completely palsied, he not having the slightest power of varying their position. The muscles were flabby, and much diminished in bulk; his bladder and rectum were paralysed; the muscles of the loins and abdomen were nearly powerless, so that he had no power of supporting himself in a chair; his hands were so feeble, that he could not hold or direct a pen, and when he attempted to shake mine, I could scarcely distinguish his utmost degree of pressure. On cross-questioning him respecting his head, he said he never had pain in it, but acknowledged that he occasionally felt giddiness, and his sight was so far impaired, that he could not see to read above two or three lines without the whole becoming confused."

Mr. Earle conceived the seat of disease to be in the head, and acted accordingly. Ten ounces of blood were taken from behind the ears by cupping, and this form of depletion was repeated several times at intervals,—with mild aperients and antiphlogistic diet. A seton was inserted in the back of the neck, and a discharge kept up by stimulating dressings. The other remedies tried were long blisters in the course of the spine, and afterwards strong camphorated mercurial ointments rub-

bed in on the same part.—Galvanism was afterwards had recourse to, but without benefit.—His progress was very slow, but uniform; and, at the time the paper was written (May, 1827,) he was able to walk with the assistance of crutches, and to stand upright without support, so that Mr. Earle entertains sanguine hopes of his complete recovery.

This case is followed by one of paraplegia, from concussion of the brain, which partially recovered, under similar treatment to that mentioned in the preceding; and this division of the subject is concluded by a case of impaired muscular power of the lower extremities, apparently dependent on affection of the brain. Here, too, the patient was relieved by small bleedings and purging.

There are thus five cases detailed, with a view of proving that paraplegia may arise from disease of the brain, without any disease of the spinal cord. In the first, as we have seen, the spine was not examined; in the second, the vertebræ were so much diseased, as to admit of being cut with a knife; in the third, the patient had fallen on his back; while in none of the three last was any opportunity afforded of examining the spine after death; we think, therefore, that Mr. Earle has rendered it probable that his position is correct,—but that the evidence goes no farther: the presence of disease in the head does not prove the absence of disease in the spinal marrow.

A considerable number of cases follow, some of paraplegia, where disease of the spine was found; others, where there was disease both of the brain and cord.

From the London Medical Gazette.

CASE OF CARCINOMA OF THE STOMACH.

Alexander Forbes, aged forty-eight, machine maker, living in Chelsea, admitted under Dr. Chambers, on the 28th of November, complains of tormina, tenesmus, and the frequent discharge of small liquid motions mixed with blood, and says he has no proper fæculent evacuations. His abdomen, which is not tense, is very tender, particularly in the region of the ascending and transverse colon. *No sickness or nausea.*

Pulse 100, small; skin warm; tongue white, moist; urine not passed freely, but natural in appearance; no appetite; he is much emaciated.

He says he has been ill only three weeks with the present symptoms, which are daily increasing in violence, but he has taken no medicines. He attributes his complaints to cold. Hydrarg. submuriat. gr. iij. opii puri gr. ss. ter die. (Milk diet.)

Nov. 30.—Has had several large feculent evacuations, mixed with a quantity of half-digested food, coagulated mucus, and green bile. He is still troubled with griping and straining, particularly at night.

Pulse 90, soft; skin cool; tongue furred at the root, moist; countenance improved; no vomiting; occasional cough; with muco-purulent sputa. Repetantur pilulæ. Sumat horâ somni tincturæ opii xxv. ex haustu pimentæ.

Under this treatment, to which were afterwards added an opiate injection every night, and mustard poultices to the abdomen, he became daily more comfortable as to his bowels, but his debility and emaciation evidently increased rapidly; the tenderness of the abdomen was distressing to the last; but no tumour or hardness was felt in any part of the belly. It may be remarked, however, that he would not allow sufficient pressure to be made on the abdomen for a satisfactory examination with reference to this point. His mouth was not made sore by the mercury. Latterly, he could take no nourishment, except small quantities of arrow-root and jelly, with wine or brandy; and he died on the 11th of Decemher.

Sectio cadaveris.—December 12th.—Appearances in the abdomen.—The great omentum rather more charged with blood than natural.

The stomach had an opaque white appearance externally, which was not natural. Within it a large ulcer, of the true *carcinomatous* character, occupied more than half the internal superficies of the organ. It extended from the cardia close to the opening of the œsophagus, along the lesser arch of the stomach to the pylorus, two-thirds of the annular edge of which aperture were involved in the ulceration, the anterior third part only of the ring being healthy. The anterior and upper portion of the stomach was free from disease internally, except that the villous coat was somewhat thicker than natural.

The pyloric extremity of the pancreas was enlarged and indurated, and the induration had the character of scirrhus.

There was no disease of the absorbent glands in the neighbourhood of the stomach and pancreas.

The mucous lining of the ascending and transverse colon exhibited traces of small superficial ulcers which had been evidently healed some time; the mucous membrane of the bowels throughout was paler and thicker than natural.

The liver was large and firm, but of a healthy colour, and not diseased in structure.

In the thorax.—The lungs were much charged with black matter, and the air-cells filled with thick frothy mucus. But there was no structural disease in the chest.

Observations.—The above case, which is very like those which formed the subject of discussion at a recent meeting of the Medical and Chirurgical Society, exhibits another instance of the imperfection of our present system of symptomatic nosology. In this case there was no symptom wanting of disease in the bowels, and scarcely any symptom present of disease of the stomach, not even nausea, and yet the former were found nearly healthy, whilst the latter was extensively disorganized by malignant ulceration.

From the patient's own account of his com-

plaint, it would follow, that it was only of five weeks' standing.

It is obvious, however, from the appearances after death, that it must have commenced at a much earlier period. He became aware of the complaint, as it would appear, only when it interfered materially with the digestion of his food, which was then passed on from the stomach into the bowels in such a state as to produce the dysenteric symptoms which induced him to apply for relief.—*St. George's Hospital.*

From the London Medical and Physical Journal.

VACCINATION IN TURKEY.

Sir—I hope you will find it convenient to insert in your next number the accompanying interesting letter. It is translated from a copy in French, which has been transmitted to me within these few days, by Dr. De Carro. The facts which it discloses, whether considered morally, medically, or politically, are very curious. He intended that it should appear in the second volume of my Life of Jenner; but as some time must elapse before it can be published, I think it wrong to withhold an account of this signal triumph of vaccination over national and religious prejudices, till that event takes place. I therefore transmit Dr. A.'s letter for your Journal, which, during a long series of years, has evinced unwearied zeal and diligence in recording every important circumstance connected with the vaccine discovery.

I have the honour to remain, sir, most faithfully yours,

J. Baron.

Gloucester, Nov. 2. 1827.

Copy of a Letter from Dr. Auban, a French Physician, settled at Constantinople for upwards of thirty years, to Dr. De Carro, formerly of Vienna, now of Prague.

If during so long a time I have not given you any sign of my being alive, it is because vaccination in this country no longer offered any thing interesting: but an event, which no one could have surmised, and which, in consequence, has astonished all those who have been made acquainted with it, ought to be transmitted to you.

Before announcing it to you, I should remind you that no Christian is ever permitted even to touch any prince of the Ottoman race, or still less to take blood from him in any way, or on any account. The great revolution that has been effected among the Mussulman people since the destruction of the Janissaries has changed every thing! The troops placed on the footing of other European soldiers,—the musket with its bayonet,—the military music, and nothing played except European airs,—a drum major, with his great cane in his hand,—the sappers preceding the regiments,—the Grand Seigneur himself in general's uniform, ordering certain manœuvres; all these are the prodigies which one can with difficulty comprehend, and the whole brought about in a very short time indeed by one individual, but he, in truth, a great man!

Vaccination performed the 16th of May on three Sultans, or Sultanes, (a title given only to infants who are born on the imperial throne,) and two other young ladies of the harem, proves how much every thing has been changed amongst this people.

On the 14th May, one of the physicians of the Sultan's seraglio begged of me to go to his apartments. He told me that he had received a message from the Echim Bachi, directing him to request of me to hold myself in readiness to go to vaccinate the children of the Sultan,—to have the vaccine matter always about me, and not to remove any distance from Pera. I remarked to him, that intrigues would cause some other person to be chosen to perform that operation. He replied to me, "There are no longer any intrigues that can cause the order of the Sultan himself to be altered, who has pointed out you on account of your age, your nation, and your name."

On the 16th, in the morning, an order for me to go to the palace with one of the physicians, who would act as interpreter, was transmitted to me. About nine o'clock we were shown into a chamber allotted to the Echim Bachi, who made no delay in coming. He caused the Kislar Aga (the chief of the black eunuchs) to be sent for, and immediately we three were introduced. At the first chamber where we stopped, we found a young sultan, seven or eight months old, who was vaccinated forthwith. A few minutes afterwards his elder sister, about a year and a half old, appeared; she was also vaccinated; and then was brought in a still younger princess, who was submitted to the same operation: and all this took place without the smallest difficulty or ceremony. In two other apartments, two young ladies were also vaccinated.

The verification was adjourned to the 23d of the same month. The Echim Bachi, being sick, did not come; but we were introduced notwithstanding, and all the persons vaccinated were found going on well, with a most beautiful (*tres-belle*) vaccine pock.

The 28th of the same month we returned to the palace, and the crusts which had formed left no fear about the maturation of the vesicles: all was finished, and complete. The Kislar Aga remitted me a very handsome present on the part of his highness, adding, "I have received this from the hand of the Grand Seigneur, to be given into yours. He has sent it to you also to testify his satisfaction with you. That which you received the first day was sent to you on the part of the mother of the two young princes. We will now go home, to return no more to this place until some new prince be born."

You have here, as I think, a piece of news which ought to be transmitted to you. If you wish for further details, let me know, and I shall consider it a duty to satisfy you. All this was done without the least mystery.

From the Medico-Chirurgical Review.

TRAITE SUR LES GASTRALGIES ET LES ENTERALGIES, *ou Maladies Nerveuses de l'Estomac et des Intestins.* Par J. P. T. Barras, M.D. Medicin des Prisons et du Bureau de Charité, &c. Octavo, pp. 330. Paris, 1827. Balliere, Bedford street, London.

In the 10th Number (fifth volume) of this Series, p. 489—500, we gave a very extended analysis of a paper on the above subject from the same author; in which was detailed Dr. Barras' own case, forming, indeed, the basis of the Memoir. It will be found, that some of the best monographs we possess arose in this way from the personal sufferings of the writers. No verbal description is equal to individual feeling in symptomatology, and, therefore, it often happens, that the pain inflicted on a single person forms a kind of expiation for the multitude. This is particularly the case in respect to stomach affections, to which medical men are very liable, and, from which, the author of the work under review has experienced no small portion of misery. Since the original memoir was published, he has collected fresh materials, and added them to a more systematic treatise on this important malady than the memoir could be said to embrace. We shall endeavour to avoid, or touch very lightly on, the materials contained in the original memoir, and select, from the present volume, as much of the new matter as possible.

1. Our author takes the definition of Pinel for the class of neurosis, or nervous diseases—"lesion of sense and motion, without inflammation or lesion of structure." This is, perhaps, as good as any other definition. The new, or physiological doctrine is acknowledged to have done great good to medical science, though not unaccompanied by evil in the shape of error. One of these errors is strongly protested against by M. Barras—namely, the doctrine which amalgamates the neurosis with the phlogosis—a doctrine powerfully supported by the late Dr. Parry in this country, but still, a doctrine untenable in theory, and dangerous in practice.

Before the days of Broussais, those nervous affections of the stomach known under the terms gastralgia, gastrodynia, cardialgia, dyspepsia, &c. were treated with bitters, tonics, anodynes, and mineral waters, together with country air and exercise. But the New School could see nothing in this class of disorders, but chronic inflammation of the gastro-intestinal mucous lining, requiring leeches to the epigastrium, gum-water, and starvation. But experience—dire experience, has taught M. Barras (and we venture to say, that it has taught some thousands of others, on both sides of the Channel) that the stomach and bowels may be the seat of an affection purely nervous—that is to say, a lesion of its sensibility, quite independent of inflammation or change of structure, which lesion is rather aggravated than relieved by the rigorous regimen and long continued depletion employed under the idea that the disease is inflammatory. We shall first introduce the particulars of some of the new cases, by which our author supports his doctrine and practice in gastralgia.

Case 1.—Madam C. aged 43 years, of very nervous temperament, and subject to pains in her stomach, experienced a severe domestic affliction, in September, 1825. Immediately afterwards, the gastric affection was much aggravated, accompanied by spasms in the chest and sense of suffocation. For these, leeches were thrice applied, mucilaginous drinks prescribed, and the most rigorous regimen enjoined. In November, she became affected with furious delirium, and, in this state, she craved lustily for animal food, and sought to obtain it by main force. M. Barras was consulted, and advised that better nourishment should be allowed. The digestion was distressing at first; but, by gradually habituating the stomach to animal matters, the digestion became easy, and, by the 15th December, the patient could drink a bottle of Bourdeaux wine without inconvenience. With this power of receiving aliment, the strength and flesh returned—her mental aberration disappeared in a great measure, and there is every appearance of complete recovery.

The author remarks that, in this case, it is pretty evident the intellectual disturbance was occasioned by the disorder of the digestive organs. He says, there is but one shade of difference between hypochondriasis and insanity. It is acknowledged, by the best observers, that the *former* is very often dependent on a morbid condition of the digestive apparatus—and, if so, why may not the *latter?* It is true that M. Georget and some other pathologists, place the cause of insanity invariably in the brain. No doubt the *immediate* cause must be in the organ of mind; but this lesion of function or structure in the organ of thought, is very often consequent on disorder in the organs of digestion. In what is called sick headach, the pain is in the head, but the cause is in the stomach or bowels.

Case 2.—M. Legros, 29 years of age, of nervous temperament, and *Maître d'hôtel* at the Prefecture of Police, had long been subject to stomach-complaints, and had difficult and painful digestion whenever he ate food of a cold or flatulent nature. Many times he vomited up the remains of fruit five or six days after eating it. Four or five years ago, he had had attacks of pain in the epigastric region, which harassed him for some months, and then went off. In May, 1826, he had a return of these pains, principally after taking food, accompanied by slow and uneasy digestion, eructations, colic, flatulence, and obstinate constipation; but no fever or vomiting. His appetite continued pretty good. Leeches, to the number of nixty-six in all, had been applied, at five different times, to the epigastrium—with gum-water—warm baths—lavements—starvation. After fifty days of this treatment, the physician in attendance was

taken ill, and M. Barras was summoned. The patient appeared the very picture of a person who was on the point of dying from hunger! Emaciation had arrived at the last degree of marasmus, and the debility was so great, that the patient could not raise himself in bed. His tongue was moist throughout—white in the middle—red at the sides and extremity—face pale—disgust for drink—vomiting, for some days past, of the gum-water which he had swallowed. Still he had some desire for substantial aliment. The pulse was weak—skin cold—urine aqueous and plentiful—stools very rare—nothing particular about the epigastrium, except that the spine could be easily felt through the abdominal parietes! The *morale* was nearly as much prostrated as the *physique* in this wretched patient.

M. Barras almost despaired of affording relief in such a case, fearing some organic mischief. Nevertheless, he cheered the patient with the hope of recovery. Some tender boiled animal food was ventured on, with Brussels biscuit, at first in the smallest quantity, and gradually increased. At the end of twelve days, he could eat the wing of a fowl, or a mutton chop, and drink some claret and water. The appetite now became so craving, that he required the utmost exertion of his reason to restrain it. Even this abstemious diet was not unattended with some pain and inconvenience, both in the stomach and bowels; but still he gained strength and flesh, and, upon this plan of mild nourishment, he recovered so far as to be able to resume his duties in six weeks. Dr. Marc saw this patient, and can vouch for the truth of the statement.

When Professor Baumes lectured on phthisis pulmonalis at Montpellier, half the students fancied themselves consumptive—Corvisart's writings and lectures caused them to believe they had aneurism of the heart—and, in these days, the Val de Grace Professor has stricken half the medical élèves of France with imaginary gastro-enteritis.

"At present, the medical students of the New School dread nothing but chronic inflammation of the stomach. As soon as they feel any uneasiness in the epigastric region, or any symptom of indigestion, they examine their tongues before a glass, or show them to one another—and if they perceive, or fancy they perceive, any redness on the sides or tip, they pronounce themselves affected with *gastro-enterite.* This false idea leads them to the use of leeches in relays—to gum-water—and acid slops. After a time, this debilitating process engenders a morbid sensibility in the stomach, and the return to solid food is accompanied by pain and inconvenience. They then have recourse to more leeches and other antiphlogistics. By this plan, their stomachs are enfeebled, and their nervous systems so much deranged, that the body and mind act and re-act on one another, so as to render them miserable." 48.

With a very trifling alteration in names, this picture would not inaptly apply, in no small number of cases, on this side of the Channel. Leeches—blue-pill—black draughts, and other measures of the kind, have damaged many a stomach in England, and aggravated, if not engendered, the very disease which the remedies were designed to remove!

Case 3.—M. N. a provincial physician, 40 years of age, of nervous temperament, was very subject to pains in the stomach, which generally yielded to rhubarb. Being a prisoner in Hungary, during one of these attacks, he applied ice to the epigastrium, and was quickly relieved. He became a zealous convert to the new doctrine. In the month of September, 1824, he was once more seized with grastralgia. He applied leeches to the epigastrium, and put himself on a course of gum-water and slops. He seemed much relieved for a time: but having been exposed one day to wet and cold, the pains returned with increased intensity, and he considered himself affected with a veritable *gastro-enterite.* Leeches, to the number of 120, were applied to the epigastrium, with all the usual antiphlogistic adjuvants. But, instead of relief, the patient experienced an aggravation of the malady. In this state he came to Paris, in January 1825, and hastened to consult "un medecin physiologiste." The physician confirmed the diagnostic of the patient, but was wise enough to leave off the leeches, and only adhered to the other parts of the plan hitherto pursued. The patient got worse. "The sensibility of the stomach was exalted to such a pitch, that the least particle of food produced great pain, nausea, and insupportable malaise." The tongue became red—the stomach flatulent—the constipation obstinate. The spirits were extremely depressed—the flesh wasted away. The nourishment was still farther diminished. In the mean time, the unhappy patient was dying with hunger, and dared not to eat! In a fit of desperation, one day, he ventured on a bit of chicken. This did not produce much uneasiness. He went into the country, and continued the light animal food, with great benefit. The morbid sensibility of the stomach gradually diminished—the digestion became more easy—the strength and flesh gradually increased—the spirits rose. At this time, M. Barras's Memoir fell into his hands, and he soon recognized his case to be one of gastralgia, rather than gastritis. He accordingly consulted the author of the Memoir, who advised him to pursue the course of light animal food, and in two months he was quite well, with the exception of a slight disposition to hypochondriasis.

Remarks.—We acknowledge that there is great difficulty sometimes in distinguishing irritation from inflammation—or, in other words, gastralgia from gastritis. In fact, the two states very often co-exist. Extremes approximate in this, as in many other cases; and ultra-depletion, with acid slops, &c. will often augment the uneasiness in the stomach as much as stimulating food. The great art consists in regulating the diet according to the degree of susceptibility in the stomach. We are no advo-

cates for *repletion*, but we are not blind to the injury which is done by *depletion*, in nervous constitutions, where irritation is far more likely to predominate than inflammatory action.

Case 4.—M. P. aged 26 years, of nervo-sanguineous temperament, and exposed, from his infancy, to constant domestic turmoils and disquiet, applied himself, at a very early age, to intense and long-protracted studies. Before the age of ten years, he became affected with headachs and vertigo—at fifteen, he complained of great irritation in the bladder—and between sixteen and nineteen, he was subject to repeated quinsies. In addition to the above, he had a most capricious stomach—his sleep was bad—and his temper restless and irritable. Up to the Autumn of 1823, however, his digestion had not been much in fault. At that period, his appetite declined—his tongue became furred—pain was felt in the stomach—the pulse was quickened—he had flushings of the cheeks, and sense of constriction about the throat. These phenomena were principally conspicuous during the period of digestion. Wine, coffee, brown, and ultimately white meat, were successively abandoned—and, ultimately, the patient was compelled to live upon soup alone.

Notwithstanding this rigid regimen, M. P. experienced severe pains in the epigastrium two hours after eating, together with obstinate constipation. In this condition the patient continued eight months. In April, 1824, he became affected with a relaxed state of the bowels, the motions being mucous, sanguineous, and containing little or no real fæcal matters. There was much pain in the abdomen, augmented by pressure—discharge of fetid gas from the bowels, with nausea, sense of strangulation, white tongue, quick small pulse, &c. All solid food was prohibited—rice water was ordered to be drunk in abundance—leeches were applied both to the anus and epigastrium, (by which the pains were increased)—emollient injections were prescribed—and one grain of opium was daily given. In three weeks the diarrhœa was removed, and it was succeeded by the original constipation. The sense of hunger was now indomitable, and some rice was allowed. The symptoms were much mitigated. Soup and vegetables, the only food allowed, still produced pain in the stomach, and considerable nervous excitement throughout the system. In July, all the original symptoms returned with aggravation. No cause could be assigned for this, except sulphureous baths, which produced great irritation on the surface of the body. Leeches were again applied, and the patient was twice bled from the arm. The sufferings were increased, and food could not be borne. The disease was now considered to be more nervous than inflammatory, and blisters were applied to the insides of the thighs. The symptoms were still farther exasperated; and, during eight days, there was much fever with excessive pain in the epigastrium. Opium and the warm bath were the only means that gave temporary relief, with the exception of *pressure*, which also solaced the pain. He went into the country in the latter part of August, and there he was obliged to confine himself entirely to light soups. Even these sometimes occasioned great malaise or actual pain. Milk next became his principal nourishment, and of this he took upwards of two pints in the 24 hours. Three months passed in this manner, the patient living sometimes on soup, sometimes on milk. Leeches had been several times applied in this time, but always with increase of the disorder.

About the middle of December, he experienced a great exasperation of the complaint—the epigastric pain after eating being insupportable, and to this was added a periodical cephalalgia returning every four or five days, beginning about midday, and lasting till midnight. He had now almost constant fever, nocturnal perspirations, and œdema of the lower extremities. At this time, a vein was opened in the foot, and, for the first time, bleeding gave relief. He went on sometimes better, sometimes worse, till the 3d of March, 1825, when he began to go out in a carriage. He continued to be bled, and to use the warm bath, from time to time. In the spring of 1826, this unfortunate patient experienced another exasperation of the malady, apparently from having taken a glass of wine. The fever, the furred tongue, the constipation, and other symptoms, became as bad as ever, and leeches were frequently applied, as well as blood taken from the arm. Milk diet was solely employed—and horse exercise was taken. In the months of May, June, and July, the patient ventured on small quantities of fowl and bread. They were digested with pain, and the digestion was almost always accompanied or succeeded by sense of distention in the stomach, difficulty of breathing, acceleration of pulse, and heat of skin. These symptoms were mitigated by decreasing, or entirely omitting, the poultry and bread. Bleeding, however, almost invariably increased the distress. In the course of this summer, the cold-bath was cautiously tried, and was evidently productive of benefit. In October, 1826, the patient came under the care of Dr. Barras. At this time, his food consisted of small quantities of milk, gruel, chicken, biscuit, and a few well-boiled vegetables, with water for drink. This diet still produced distention, pain, and even some fever. But his strength was considerable, and he was by no means emaciated. His own remark was as follows:

"My stomach is so capricious, that what will agree one day, will disagree the next; but I always find, that a simple diminution in the *quantity* of my food has more effect in reducing the symptoms than all the leechings or other means that can be devised."

The above case presents a good example of that *morbid sensibility* of the stomach and bowels which seems to constitute the principal feature in dyspeptic affections.* We con-

* The following passage in a work recently published by Professor Schmidtman, of Ber-

sider the disease to have been, fundamentally and generally, a gastralgia, rather than a gastritis; but we have little doubt that, occasionally, there was some inflammatory action mixed up with a high degree of nervous irritation in the digestive apparatus.

Dr. Barras has introduced a considerable number of cases from a work by Professor Schmidtman, of Berlin, on cardialgic affections, in which the German physician takes nearly the same view of the disease as our author. The plan of M. Schmidtman was generally the exhibition of bitters and tonics, with light plain food, in small quantities, rather than the leechings and slops of the Broussaians. These cases we need not detail. Nor shall we stop to portray the etiology of the disease, as we have given a pretty full view of this in the analysis of the original memoir.

Theory of Nervous Affections.

M. Barras conceives that, from an attentive observation of the phenomena of the neurosis, we may divide them into two classes or states—namely, neurosis dependent on irritation or excess of tonicity—and, neurosis dependent on debility or defect of tone in the nervous system, in the same way that we have inflammations of a *sthenic* and of an *asthenic* character—and hemorrhages of an active and passive nature. He denominates the former "neurosis *per erethismum*"—the latter, "neurosis *per atoniam*." Tetanus is adduced as the prototype of the former, (tonic neurosis,) and paralysis as that of the latter, or atonic neurosis. The one class is characterised by *exaltation* and disorder of the sensibility, and also of the functions of the nervous system—the other, by depression (affaiblissement) and trouble of the sensibility and functions.

But, as nature always proceeds by gradual steps, and never suddenly, so, between erethism and atony, there are innumerable shades, till, at length, the two extremes meet and intermingle. But it is to be remembered, that *debility* of the nervous system is very frequently accompanied by *irritability* of the same system, a circumstance that embarrasses us much in the application of remedies. Hence the danger of using stimulants in cases of debility of the stomach, for example—since the morbid sensibility of the same organ may thus be greatly exasperated. "Alors la maladie ne parait consister que dans une *mobilité* extraordinaire de l'appareil sensitif, et elle n'a, pour principal symptôme que *l'abberration de la sensibilité* et des fonctions de cet appareil." In short, it comes to that state denominated by Dr. Johnson, "MORBID SENSIBILITY"—a condition seldom absent in this class of maladies:—a condition which, as often combining the elements of atony and irritability—of phlogosis and neurosis, demands a mixed or alternated treatment, according as one state or other happens to predominate. It is incredible the mischief that is done by *routine* practice in this class of human maladies! The drastic purgatives, the fiery tonics, and the long continued mercurials, are the bane of dyspepsia—and even where the medicines are proper, the inattention to diet, both by patient and physician, often renders fruitless the whole range of the pharmacopœia. Well may Dr. Barras observe, that the treatment of dyspepsia "est hygiénique plutot que medicinal."

The author before us remarks that, the precept laid down by most medical men, "to eat little and often," is an error into which he himself fell, and to his cost.

"In this complaint," says he, "it frequently happens that a pressing desire for food takes place a few hours after a reasonable repast. Wo to him who indulges this appetite! It is a morbid sense of hunger which ought to be borne with, unless extremely urgent.* It is certainly better to eat at stated periods, of regular duration, than to be frequently satisfying the stomach. At the same time, it is necessary, in these cases, not to use too sparing a diet, even where there is pain or uneasiness after eating, otherwise the stomach will, as it were, prey on itself, and the irritability will be increased. Indeed, it requires all the vigilance of the physician to watch and manage these cases, so as not to err on either extreme."

We consider that our author has verged towards a dangerous point in the following precept.

"In those cases of gastralgia accompanied by appetite, the patient may eat with perfect security, and without fearing gastritis. He ought not to retrench one particle of the usual quantity taken in health, except in some rare cases, where the alimentary matters are rejected—that is, where the sensibility of the stomach is so exalted, that it cannot bear the contact of victuals. Neither the malaise, the weight at the epigastrium, the exasperation of pain after eating, or even the vomiting of watery matters some time after meals, should deter him from taking food, since these inconveniences are less prejudicial than continual hunger—and of two evils, it is better to choose the lesser."

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lin, shows the most remarkable correspondence of ideas between the German physician and Dr. Johnson, on the state called morbid sensibility of the stomach.

"Quantum investigando (says he) et cogitando potui assequi, cardialgia primaria (the name which he gives to dyspepsia) semper fundatur *in nimia et immodica ventriculi sensibilitate.*"—SUMMA OBSERVATIONUM, &c. BERLIN, 1826.

* This ravenous desire for food, so soon after eating, is a strong proof of "morbid sensibility" in the stomach. This organ cannot bear the presence of food long enough to be perfectly digested, and the consequence is, that the food is passed into the duodenum in a crude state, and due *assimilation* is never performed. Hence the patient wastes in flesh, and decays in strength, while he eats more than a person in health.—*Rev.*

We certainly should counsel the patient, in such cases, to keep a guard over his appetite, and not eat quite so much as in health, however pressing the desire for food. We agree with the author in the following precept. "Those who do *not* feel this sense of hunger should content themselves with a small quantity of food, but not abstain from it entirely, unless the aliment be vomited up soon after eating. I have found a small quantity of food, under these circumstances, better than entire abstinence." In those inordinate appetencies, entitled bulimiæ, he cautions the patient against eating to satiety. "In all cases, it is best to eat at stated periods, and to confine the meals to three in the 24 hours."

The quantity, as well as the quality of our food, in gastralgic affections, is to be strictly attended to. Chicken broth, with rice, barley, or biscuit, is the best species, according to our author, to begin with, and then to gradually ascend to mutton, and even beef, carefully watching the effects. Dr. Barras seems to have a great partiality for rice and maize, but to dread some other of the farinaceæ, as salop, tapioca, &c. He does not object to gruel and panada. Dr. B. is inordinate in praise of sugar, as being, "veritablement l'ami des nerfs." We have no objection to a moderate proportion of this substance, against which an unfounded prejudice exists on this side of the Channel. Tender and well boiled vegetables may be ventured on, and continued, unless they produce flatulence or acidity. Asparagus, sea-cale, cauliflower, young turnips, may be tried when the patient is tired of stale bread and biscuit.

For drink, our author advises water, just coloured with claret or old Burgundy. "In those numerous cases where it is impossible to say whether erethism or atony most prevails, and where we see only proofs of morbid sensibility of the stomach, we ought to begin with the very lightest species of food, in small quantities, and gradually ascend in the scale of diet, according as the digestive power of the stomach improves, and its morbid sensibility diminishes."

He very properly remarks, that we can only lay down general rules, in our dietetics, subject to numerous exceptions, varying with the idiosyncrasies of different patients.

Epigastric leeching, Dr. B. confines to cases where the patient is robust, where eruptions or evacuations have been suppressed, and where there are strong symptoms of gastritis, rather than gastralgia. To the vegetable acids and gum water, so useful in chronic inflammation of the mucous membrane of the stomach, he decidedly objects in cases of dyspepsia.

The morbid sensibility of the gastric and intestinal nerves being once subdued, or at least allayed, we may have recourse to light bitters, and ultimately tonics. But our author very prudently warns the practitioner against the too early use of these medicines, by which thousands of stomachs in these kingdoms are ruined! "Mais, si une longue medication adoucissante entretient et perpetue les maux des nerfs, il y a aussi du danger à passer tout d'un coup à l'emploi des fortifians; ce passsge subit et sans gradation ne manque pas de renouveler l'irritation nerveuse:—Il pourrait même enflammer l'estomac."

The author touches on various points of hygiene, as connected with the treatment of gastralgia. He strongly recommends the air of the country, and hints at the good effects of travelling; but he is evidently unacquainted with the powerful influence of this last species of exercise and recreation on the digestive organs. The French, indeed, are bad travellers—at least they have not half the passion of the English for this agreeable mode of life; nor do they seem to enjoy the natural beauty or majesty of scenery like their insular neighbours. Be this as it may, the man of opulence, or even moderate means, who labours under any of the more severe forms of gastric disorder—and God knows these forms are numerous enough, does a great injury to himself, if he tries not the effect of travelling for its cure, especially among the mountains of Scotland, Wales, or Switzerland. But, as we shall take another opportunity of laying before the profession some more extended observations on this subject, we say no more at present.

From the Edinburgh Medical and Surgical Journal.

POISONING WITH ARSENIC—*Perforation of the Stomach—Detection of the Poison in very minute quantity—Inefficiency of the liquid tests.* By Robert Christison, M. D. F. R. S. E. F. R. C. Physician and Professor of Medical Jurisprudence and Police in the University of Edinburgh, &c.&c.

Margaret Wishart was tried at last Perth Spring Circuit for the murder of her sister Jean and her natural child, by administering to them arsenic or some other poisonous substance.

The deceased Jean Wishart was totally blind, and in consequence had been for some time a burden on her sister, the prisoner, who in particular always made ready her food. The blind woman had a lover in the person of a man Roy, a lodger in the house, by whom she had a child about four years before her death, and by whom she was again pregnant at the time the poison was supposed to have been given. This man was also on very intimate terms with the prisoner, and there was strong reason to believe that he cohabited with her. Such being the state of the household, it may be conceived, that the several members of it could not be on good terms with one another. Accordingly, although several neighbours bore testimony to the friendly disposition of the prisoner towards her sister, those who lived in the house with them deposed, that the deceased frequently complained of the usage she received both from her sister and from Roy; and she asked one witness to take her as a lodger, as on accouut of

her pregnancy she was apprehensive of ill treatment at their hands, and even used the expression that "she would not get leave to live."

On the evening of Tuesday the 3d of October she was seen by a neighbour taking porridge to supper; the prisoner and a man who lodged in the house being present, but not joining her. About twenty minutes afterwards she felt unwell and blamed the porridge as the cause; and in a few minutes more she was attacked with vomiting. During her subsequent illness, which ended fatally on the evening of Saturday the 7th, she had not any medical attendant, except that on Friday, when she was taken in labour, a midwife was sent for to deliver her. Several people advised the prisoner to get a medical person to attend her, and the deceased herself asked her to do so; but she refused, saying that she could not afford it, and that all the doctors in Arbroath could not do any good. She likewise refused to send for another sister who lived in the same town.

A few weeks before her trial the prisoner added an important circumstance to the moral proof, which, it will be seen, was previously by no means strong, by attempting to suborn a witness. A young woman, who visited her in prison, said in presence of the jailor and others, that she had accompanied the deceased to various shops in Arbroath, to ask for poison, and that the deceased actually got arsenic at one of them; but on the trial she confessed that it was all a fabrication, and that she had been prevailed on to tell it by the prisoner's repeated importunities.

No evidence could be procured that the prisoner had either purchased arsenic or had it in her possession.

The medical evidence in this case rested chiefly on the morbid appearances and chemical analysis.

The account which could be procured of the symptoms was exceedingly imperfect, as it merely went to show that the deceased was affected with more or less vomiting, purging, thirst, and general uneasiness, from the evening on which she was taken ill till that on which she died; that she was delivered of a living child on Friday; and that on Saturday morning the limbs were cold and stiff. An important point regarding the symptoms, however, was ascertained,—namely, that they began within half an hour after a meal. The symptoms do not appear to have been violent. Such as they were, the witnesses for the crown all agreed, that they might be caused by arsenic, but admitted that they might equally be caused by natural disease.

The body was disinterred for examination on the 15th, eight days after death, by Drs. Arrot, Sharpey, and Palmer; and the following is an account of the chief appearances described in their report. On opening the abdomen they found about a pint of red-coloured liquid in the cavity of the peritoneum, a small perforation on the anterior surface of the stomach, through which a small quantity of black fluid escaped,—the external surface of the intestines red and highly vascular,—the uterus not reduced to its natural size,—the other viscera healthy. The stomach contained a thick, opaque, brownish-black liquid, and a little solid vegetable matter. Its inner surface was very vascular, and marked in different places with dark brown spots of various sizes: and the villous membrane was abraded here and there. The intestines were internally very red and quite empty.

A portion of the stomach, including the perforation, together with part of the contents, was sent to me for examination and analysis. The stomach having been preserved in a bottle along with the contents, and the examination not having been made till the 21st, the vascularity had entirely disappeared, and the membranes had imbibed the fluid like a sponge —but the nature of the perforation was quite distinct. The aperture in the peritoneal coat, which was about the size of a pea, was surrounded by a dark, ragged margin, and the inner coats were more extensively destroyed around it.

The chemical evidence was decisive of the presence of arsenic in the fluid part of the contents, and still more in the coats of the stomach.

Drs. Arrot, Sharpey, and Palmer, made several solutions by diluting and filtering the contents, and by boiling portions of the stomach and filtering the decoctions. In none of these fluids did the ammoniacal sulphate of copper, or ammoniacal-nitrate of silver indicate the presence of arsenic. But the sulphureous test in all its forms gave satisfactory indications. After some preliminary trials with sulphurated hydrogen water, and the hydrosulphuret of ammonia with the subsequent addition of muriatic acid, they united the various fluids, and subjected them to the process which I have recommended.* The liquor was acidulated with acetic acid, and then subjected to a stream of sulphuretted-hydrogen; upon which a yellow precipitate was procured, that yielded by reduction with the black flux, in three different trials, patches of metallic incrustation. I regret that the limits of this abstract do not permit me to give more than the substance of the able report of the Arbroath gentlemen. The whole investigation reflected the greatest credit on them, but particularly the chemical part of it; for, if I may judge from my own experiments, there has never been a judicial inquiry in which so minute a quantity of arsenic has been so unequivocally discovered.

In my own analysis I first formed a decoction of the contents of the stomach separately, and subjected each, after acidulation with acetic acid, to sulphuretted-hydrogen gas; a lemmon-yellow milkiness ensued, which on boiling gave place to a lemmon-yellow flocculent precipitate, with brilliant brass-yel-

*Edin. Med. and Surg. Journ. for July 1824, and Edin. Chir. Med. Trans. Vol. I.

low scales intermingled. This, when collected from both fluids and dried and reduced in a small tube, gave an arsenical crust with all its properties fully developed; and the crust was converted by repeated sublimation into little octahedral crystals of oxide of arsenic, which I estimated as amounting to about a fortieth part of a grain.

As the decoction of the stomach still retained its yellow colour, I evaporated it, and procured a yellow precipitate in broad flakes. Knowing from experience that there was too much animal matter present in this precipitate to admit of the process of reduction being applied directly, I subjected it to a farther process, in order to destroy the animal matter. The impure sulphuret was acted on by nitric acid with the aid of heat, and consequently oxidated; the acids were then neutralized with potass, and the solution evaporated to dryness; the mass was then deflagrated in a glass tube, which process takes place gently, with effervescence and without burning, if the proportion of the nitre is not too small; the product was then dissolved out, exactly neutralized with nitric acid, filtered, a small portion tested with nitrate of silver, which gave a brick-red precipitate, and the remainder treated with a solution of nitrate of lead as long as any precipitation took place. The precipitate, which, besides other salts, contained arseniate of lead, gave a remarkably characteristic crust when mixed with freshly ignited charcoal and heated in a tube strongly with the blowpipe; and the crust subsequently gave octaëdral crystals when repeatedly sublimed.* The quantity of oxide procured by this process was not sensibly greater than by the former.

The prisoner was convicted of poisoning her sister. Many persons entertained doubts of the sufficiency of the moral evidence, and some attempts were made to procure her pardon on the ground of its inadequacy. She was executed, however, and died protesting her innocence.

The above case is interesting on account of the extreme minuteness of the quantity of arsenic detected, the quantity being less, I believe, than was ever detected before in medico-legal practice. It is likewise interesting, as it shows how much more skilfully medico-legal investigations are now conducted in country districts than they were but a few years ago; for the researches of the Arbroath gentlemen are, with some insignificant exceptions in point of form, complete in every particular. And it is farther valuable as being, so far as I know, the only example yet published, which will authorize a very frequent statement in general works on medical jurisprudence,—that arsenic causes perforation of the stomach.

* I have since been in the custom of employing a different process for getting rid of the animal matter *before* the precipitation of the sulphuret; and in consequence the sulphuret under all circumstances is procured in a state fit for immediate reduction. This improvement I shall soon have an opportunity of making public.

From the London Medical and Physical Journal.

SIR GEORGE SMITH GIBBES ON LIFE.

It appears, from well-established experiments, that all the animal tissues are resolvable on decomposition into minute bodies, which, in water, and under the influence of the sun, possess life and activity. These animalcula, or, more properly speaking, these ultimate points of vital activity, cannot be further decomposed except by the agency of fire, when they become subject to chemical laws, and assume the state of gas.

By the aid of the microscope, and with a little management, it may be clearly seen that many of the processes of life depend upon these minute animals, and that the ordinary laws of matter, or the laws which regulate the material world, are totally out of the question in explaining the phenomena presented by these, the apparent rudiments of vitality.

The vitality and activity of the animalcula infusoria depend upon the influence of the sun, under which every pool of water becomes tenanted by myriads of them, all displaying, when examined by the microscope, the most unequivocal proofs of life.

The sun, the source of life as well as light, supplies this vitality in all the endless variety of organized and living action; and modifies matter, in all these processes, in a manner totally different from all physical and chemical principles. We might as reasonably compare a scarlet colour with the sound of a trumpet, as the phenomena of life and organization with any of the subjects or any of the laws of the material world.

The most subtle fluids, as heat, light, electricity, magnetism, &c. present phenomena which every new discovery brings nearer in affinity to the material world. Life, on the contrary, is wholly independent of all these, opposing the laws of matter in every instance, and defying, in all its combinations, those laws of affinity and attraction which form the foundation of the physical sciences. Organized bodies are endowed with properties totally different from all others, and no portion of such bodies is subject to the ordinary laws of nature until every vestige of life be extinct.

Although in the dissecting room the human subject be dead as regards the creature then under consideration, yet the vitality is not lost, for every part of the organized structure resolves itself into new arrangements, and myriads of vital rudiments reassert their rank in the living world. Thus manures supply them to the growing vegetable, and digestion prepares them for the use of animals. Built up as the human fabric is by innumerable myriads of living rudiments, we easily admit the fact that every portion of it possesses vital

powers: powers, in every possible view of them, wholly differing from the laws which regulate every subject of the material world.

Above thirty years ago I instituted a series of experiments respecting this very curious subject, which appeared then, as they now do, quite conclusive as to the essential purpose which the animalcula infusoria perform in the growth of vegetables. It was from considering the opinions of Ingenhouz, Priestley, and others, on the nature of the green matter which forms on water, that I was led to examine very carefully with the microscope the animalcula infusoria, and to observe this matter, and the fibrillæ of the roots of other vegetables, whilst growing in water. Myriads of animalcula may be seen around the extremities of such vegetables, and it appears that these minute living bodies agglutinate themselves together, and *absolutely themselves become the added part:* so that the fibres seem to be nothing more than a congeries of these animalcula, forming the growing part. They may be seen like bees entering a hive, and making up, when fixed together, the fibre itself.

The whole substance of the conferva rivularis certainly appears to be nothing more than a condensed congeries of the animalcula infusoria. If a basin of water be half shaded from the sun, whilst the other half is exposed to its rays, we find the shaded water to be without the animalcula, whilst they swarm by myriads in the exposed portion.

If a sprig of mint be placed in this water, the fibres of the roots extend and grow in the illuminated portion, but they make no advance in the dark part. The animalcula are seen to be supplied on the one side, and to fix themselves on the ends of the fibres, and to increase them longitudinally: on the other side, the animalcula being absent, the roots do not grow. The increase of the several parts of vegetables seems entirely dependent on the supply which they receive of these animalcula by the roots, leaves, &c.; for the leaves and blades of corn, even when growing in a room, are terminated by drops of water evidently supplying these monades, which arrange themselves according to the necessities of the growing vegetable, and according to the impulse originally given, and continuall supplied by the seed of the plant.

The whole history and nature of compost and manure lead to the conclusion that, by certain decompositions of animal and vegetable matters, these first rudiments of life are again set free to become, under new arrangements, subservient to the growth of the renewed vegetation.

I purpose in my next communication to show the application of the foregoing observations to the animal system; their importance in explaining and directing the actions and functions of its most essential organs, and proving how far we may consider the living world independent of the ordinary laws of matter.

Bath, September, 1827.

From the Lancet.

CASE OF TETANUS FOLLOWING THE DIVISION OF CICATRICES, CONSEQUENT UPON A BURN.

The following case of tetanus, supervening the division of cicatrices of long standing, and the result of a severe burn, has excited much interest. The tetanic symptoms, it will be seen, came on three weeks after the performance of the operation, and at a period when the wound was granulating, and in a very healthy condition; the disease ran its course uncontrolled by the means employed, and proved fatal on the ninth day.

The patient, a spare female, 15 years of age, and of light complexion, was admitted into Mary's Ward on the 5th of September, under Mr. Bransby Cooper. She had been severely burned when about three years old, and in consequence there were contractions of the skin, both at the anterior and posterior fold of the axilla, which in some degree interfered with the motions of the arm. At a month after admission, an operation was performed by Mr. Cooper, which, in fact, consisted simply in the division of the parts. About three weeks afterwards, on the 14th of October, and when, as we before stated, the wound was in a healthy condition and healing fast, she complained of stiffness at the back of the neck, which she attributed to cold. On the following day, Monday the 15th, the stiffness had somewhat increased, and was attended with some pain, and on Tuesday the particular attention of the dresser was called to her; the bowels at this time were constipated, there was much rigidity of the muscles of the neck and those beneath the jaw, and the mouth could only be opened to a short distance. A purgative draught was prescribed to be taken every three hours, and a pill, composed of tartar emetic, opium, and calomel, ordered to be taken every six hours. In the evening a purgative enema was administered. On the following day, the 17th, the symptoms were further aggravated; the pulse was very rapid, and there was general spasm of the muscles. A warm bath was directed, and the antimony and opium continued, the calomel being omitted. Hemlock poultices were applied on the day previously, and these were continued,

On the 18th the poor girl was in a most distressing condition, all the symptoms of tetanus existing in a high degree; the warm bath afforded slight relief. Half a drachm of laudanum was exhibited, which in some degree appeared to lessen the violence of the symptoms; subsequently the dose was repeated twice, without any manifest effect.

On the 19th and 20th, the poor girl continued in a most distressing state; the slightest excitement bringing on the most violent spasms of all the muscles of the body; the pulse was very rapid and skin moist, and these symptoms prevailed in a remarkable degree throughout the disease. Æther was now frequently exhibited, and on the 20th a turpentine enema was exhibited, the bowels not

having been freely acted upon since the attack.

On the 21st, a blister was applied to the pit of the stomach; the symptoms, if possible, had increased in violence, and the poor creature was now incapable of taking either medicine or nutriment. She continued in this state throughout the following day, and until about eleven o'clock of Tuesday morning, the 23d, when she died, being perfectly sensible, as indeed she had been, throughout the entire progress of the disease.

The friends would not permit the body to be examined.—*Guy's Hospital.*

From the Lancet.

CASE OF ENORMOUS OVARIAN TUMOUR—*Interesting Post Mortem Examination.*

Mary ———, Oct. 20, of a scrofulous, delicate habit of body. In the beginning of January last, after having been copiously bled for a supposed aneurism of the heart, she first perceived a small hard tumour in the left groin, which was attended with no pain, and indeed scarcely attracted her attention. This, however, gradually increased in size, and as it became larger, produced severe pains, extending through the pelvic cavity. In June, it had attained a very considerable size, and produced a swelling of the abdomen, apparent to every observer. Her general health became affected, she lost flesh and strength, and had œdema pedum. At this period she consulted Mr. Wardrop, who, as she did not wish to become a patient in the hospital, has visited her occasionally with her medical attendant, Mr. Blackstone, of Camdentown, till the period of her death. Notwithstanding the employment of every means usual in such complaints, the tumour gradually and rapidly increased. She was, latterly, attacked several times with inflammation of the peritoneum, which rendered the abstraction of blood necessary. This, however, had the unavoidable effect of greatly reducing her strength; and, two months ago, a collection of fluid had taken place in the abdomen. From this accumulation of disease, and worn out by the repeated attacks of peritoneal inflammation, she at length died on the 24th of October.

Dissection. On laying the abdomen freely open, a tumour was seen occupying the whole cavity of the pelvis and part of the abdomen, extending from the sacrum to above the umbilicus, and completely filling up the intermediate space. This tumour, whose surface was covered by a serous envelope, was considerably broader above than below. Its superior surface was uneven, but not ulcerated, and was studded with several large formations resembling hydatids in an inspissated state, while at its base there projected an ulcerated mass, exactly resembling cineritious matter, and having the appearance of fungus hæmatodes.

At the lower and anterior part, the swelling adhered strongly to the broad ligament of the uterus, and to the Fallopian tube—but not a vestige of the left ovary remained. At other points it had no attachments, except where it was in contact with the sacral vertebræ. The uterus was small and sound, although containing a quantity of a viscid glairy fluid. The right ovary was slightly enlarged and very much indurated, but had no connexion with the tumour. In the peritoneum, reflected over the uterus and bladder, there was a great congeries of large tubercular bodies, in various stages of development, but none of them, in this situation, had the appearance of hydatids, such as have been described as existing at the superior margin of the foreign mass.

On cutting through the tumour, it was found to be composed of various structures: inferiorly, of soft cineritious matter, contained in large cells; in the centre, of a substance resembling blood; superiorly, of a harder fleshy structure, intersected with thick cellular membrane; and around its margin, it was formed of a green matter, resembling lymph. Besides this general appearance, on more minute examination there were observable many small cysts, containing a curdy matter, interspersed throughout the whole mass. On cutting out this enormous tumour, it was found to be 31 inches in circumference.

By prosecuting the dissection, the pancreas was discovered to be greatly enlarged, and converted into a substance resembling in appearance the ovarian tumour, while a vast number of mesenteric glands were increased in size, and composed of soft cineritious materials.

The peritoneum at several parts was of a deep black colour, and the omentum was evidently in a melanotic condition, containing in its structure, a black matter which could be easily washed away. The mucous membrane of the vagina, uterus and intestines was slightly vascular.

The occurrence of hydatids and tubercles in different stages in the same diseased structure as happened in this tumour, is one of rather a rare occurrence. It appears to be highly confirmatory of the opinions advanced by Baron and Jenner, as to the origin and development of tubercles.

From the London Medical and Physical Journal.

CASE OF DISTENTION OF THE UNIMPREGNATED UTERUS WITH BLOOD. By John Paul, M. D., Member of the Royal College of Surgeons in London.

The following case, I hope, will not be deemed unworthy of record in the London Medical and Physical Journal, as it furnishes us with a valuable pathological fact: for, so far as I know, distention of the unimpregnated uterus with blood to the same extent, and occurring in the same manner, has not hitherto been taken notice of. If in this I am mistaken, want of reference, to which a provin-

cial surgeon is necessarily subjected, must plead my excuse.

A. B——, an unmarried lady, ætat. forty-three, delicate in her health and of lax fibre, has been three times the subject of the complaint, of which I am now to attempt a short description. She had the first attack in the autumn of 1820, the second in the summer of 1822, and the third in December, 1826. Previous to this last illness, she had undergone great fatigue in attending a near relative, who was very ill of fever, and in whose recovery she was deeply and anxiously interested. For many nights during her attendance she had not been in bed, and was much exposed to cold. Her menstrual discharge came on whilst she was thus engaged, and, after continuing nine days, greatly too profuse, it suddenly stopped; and on the following day her abdomen was tumid. She was now obliged to confine herself to bed.

The discharge returned two days after; and, when I saw her on the 8th of December, she had been five days confined to bed, during which time she had had no sleep, and complained that she was distressed with headach and great uneasiness in her back. She was extremely despondent, and exhibited occasionally symptoms of hysteria; pulse was ninety-eight; heat of skin was rather above the natural standard. On examining the abdomen, it was with ease ascertained that the uterus was greatly enlarged, its fundus extending very near to the umbilicus: and in this there could be no deception, as the abdominal parietes were so thin that the outlines of the distended uterus could be distinctly traced. It was fully as large as it is at the completion of the fifth month of utero-gestation. When the patient lay on her back, the medial line intersected the tumour exactly; when she lay on her side, the tumour inclined to that side.

The history of the two preceding attacks, as I shall presently show, proved beyond all doubt that this enlargement was from distention of the uterus with blood. It was proposed, in the first place, to irritate with the finger the os uteri, with the view of bringing on uterine contraction; but the patient could by no entreaty be prevailed with to submit to this, and, consequently, no examination per vaginam could be obtained. Sleep was procured by the exhibition of an opiate, and in the course of a few days, the discharge was entirely arrested by the administration of the super-acetate of lead, combined with small quantities of opium. To give support to the abdomen, a roller was applied tightly round the body.

On the 25th January, 1827, the menstrual discharge re-appeared, and continued four days. It was thick and of a dark colour, but was not fœtid, nor did it contain any clots. By this discharge, the tumour was one-half reduced in size; and, on the return of menstruation at the usual period, the whole of the blood retained in utero was thrown off, rather in a fœtid state; when, on the most minute examination, no appearance of tumour was perceptible above the pubes. Since that time there has been no return of the complaint.

This patient, preceding the first attack in 1820, was bled from the arm on account of pain in her side, and on this hemorrhage from the uterus immediately supervened: the discharge externally was arrested by the application of cold cloths, but blood continued to be poured out internally, as the uterus was soon so much distended as to be in contact with the umbilicus. Anasarca, from the loss of blood, was now general, and the patient appeared to be in a very precarious state. About three months afterwards, menstruation came on, and a good deal of clotted blood was discharged; but the swelling did not entirely disappear till after the third menstrual period. After this her health was soon restored.

It was immediately after menstruation was suddenly suppressed by exposure to cold, whilst it was profuse, that this distention of the uterus occurred the second time. At the end of two months, menstruation again made its appearance, when a quantity of dark coloured blood, in a very fœtid state, was suddenly discharged; and the patient nearly lost her life on account of the profuseness of the discharge, and the distance at which she lived from medical assistance.

There was now no remains of uterine enlargement; but, such was the state of weakness to which she was reduced, along with the anasarcous swellings, which had again supervened, that the re-establishment of her health required great care and a considerable length of time.

In the treatment of this case, there was nothing remarkable, and it is therefore unnecessary to give any detail of it. It was conducted on the principle of preventing, as much as possible, the loss of blood whilst the uterus was in a state of distention; and, after the retained blood was discharged, every means were had recourse to that could give tone to the system. During the distention, nothing was tried with the view of bringing on uterine contraction, except friction and the use of a bandage. For that purpose I proposed to irritate the os uteri with my finger, but it was decidedly objected to. It did also occur to me to try the secale cornutum during the last attack, but none could be procured in this part of the country.

When we reflect on the anatomical structure of the uterus, it is difficult to conceive the possibility of its distention in the manner now detailed; but the facts adduced incontrovertibly prove, in my opinion, that such was the case. As the distention supervened immediately on the sudden obstruction of the menses from the effect of cold, the os uteri, I think, must have been firmly closed either by spasm or a clot of blood, or probably by both. Its mouth being thus shut, the uterus, it would appear, became dilated from the impulse of the internal hemorrhage.

From the London Medical and Physical Journal.

CASE OF TRANSFUSION, *contained in an Extract of a Letter from* Mr. R. P. Philpott, *of Brighton, to* Dr. Blundell. (Communicated by C. Waller, Esq.)

July 21, 1827.—A poor woman, named Ashdown, aged twenty-nine, now in the sixth month of pregnancy, who during three former pregnancies had suffered from varicose veins of the legs, had this day, after standing for some hours at the ironing board of a laundress, a sudden effusion of blood from the bursting of the vena saphena, about six inches above the right ankle.

About a quarter of an hour elapsed before I reached the house where she was, when she had lost, as it seemed, between eight and ten pints of blood. Assisted by my friend Mr. Philipson, I, by compress and bandage, immediately stopped the hemorrhage. The patient was in a state of complete syncope, without pulse at the wrists, and but a very indistinct pulsation at the region of the heart; she was cold, with lips and face completely blanched; a profuse sweat broke out, and she passed both fæces and urine involuntarily, so that she appeared moribund. Stimulants applied to the nostrils produced no excitment, and she had totally lost the power of deglutition. Though with little hope or probability of her recovery, we determined to attempt the operation of transfusion.

A person being quickly obtained from whom blood was drawn, a ligature was applied on the right arm of the patient, the median vein laid bare, and carefully dissected, so that a probe was passed under it; the vein was then opened, and the end of a common bone syringe, (the only one at hand,) with its extremity filed off, was with some difficulty introduced. Several syringe-fulls were thus injected. When about four ounces had been thrown in, she became extremely restless, throwing her head from side to side, and making an effort to vomit. We then desisted, and had the satisfaction of distinguishing the pulse at the wrist, though extremely small and rapid: warmth was applied, and wine and brandy and water administered frequently.

In the evening, six hours after the operation, the pulse was then distinct, and at 120. She was so much better as to answer several questions. Heat was gradually developed, and the next day she was removed in a chaise to her own house.

July 25th.—Slight suppuration became established in the wound in the arm, without the least appearance of inflammation in the vein, although, from the frequent introduction of so rude an instrument, we were afraid the internal coat of the vein might be injured.

30th.—Much better. Has felt no movement of the fœtus since the accident.

August 13th.—She was taken in labour, and in a few hours the fœtus, in a putrid state, expelled. A cool regimen, with light but nourishing diet, and the occasional use of a mild laxative, were the means employed to promote her recovery, and she is now (October 12th) in good health, and following her former avocations.

The ruptured vein in the leg speedily healed, and all trace of the disease has disappeared since her labour. Dr. Blair was kind enough to visit the poor woman several times during her recovery.

From the Medico-Chirurgical Review.

PERITONEAL INFLAMMATION.

Clinique Medicale. Par G. Andral, Fils.

[Hôpital de la Charité.]

In a former number, (No. 11, for Jan. 1827, page 145—161,) we made our readers acquainted with a very able paper by M. Andral, on diseased conditions of the mucous membrane, and muscular coat of the stomach. We now proceed to the pathology of the peritoneum, occupying a considerable portion of the fourth volume of this able pathologist. The diseases of the liver will form a separate article, which we hope to include in our next number.

We have often drawn the attention of our brethren in this country to the pathological investigations of the French physicians, while we lamented the want of means—as well, perhaps, as the want of zeal, in these islands, which has so long and so materially thrown us into the rear in this particular branch of the science of disease. We every day hear it urged, in excuse, that the investigation of diseased structures leads men astray, and makes them mistake effects for causes. Granting that this is the case, it is only the abuse of a good thing. Is there any possible way of connecting with their appropriate symptoms, the origin, progress, and acmé of organic changes in the living body, but by numerous dissections performed at all periods of the disease, from the first disturbance of function to the ultimate annihilation of the same, by structural alteration? We say there cannot be any other mode of acquiring this important information. The ancients were, no doubt, very clever and very correct in noting down the symptoms of diseases, and observing their causes. But they could not possibly have formed correct notions of the conditions of internal organs, of which the symptoms were mere indications;—because they did not examine into these pathological conditions. Their diagnoses were, therefore, mere guess-work, and not founded on accurate data. They must have been much more frequently wrong in their diagnoses than modern pathologists. Let us not then attempt to separate these two branches of medical knowledge—symptomatology and morbid anatomy—for on their perpetual junction and mutual co-operation our prognosis and therapeia must depend. The Frenchman may lean too much on post-mortem investigations—the Englishman may trust too much to the observance of symptoms during life—but the wise man will endeavour to make each process throw light on the other.

With these few preliminary remarks tending to bespeak the attention—perhaps, the patience of our readers, we shall proceed to give some account of M. Andral's researches on peritoneal inflammation.

1. *Acute Peritonitis.*—In the following cases, our talented and indefatigable author wishes to draw attention, *first*, to certain causes which are very generally operative in the production of peritonitis—*secondly*, to the different symptoms which indicate the existence of this serious affection—*thirdly*, to the march of the disease, which, in some cases, is so rapid that only a few hours intervene between the origin of the inflammation and death; while, in other cases, the inflammation, though always acute, will not prove fatal till after the lapse of thirty or forty days.

Illustrations.—Case 1. A boy, 15 years of age, of feeble constitution, a compositor in a printing office, went to work, in his usual health, on the morning of the 30th April. At 2, P. M. he felt a pain in the lower part of the right side of the abdomen, which obliged him to break off from his work. In the course of the night, the pain extended to the hypochondriac and epigastric regions, accompanied by vomiting and great prostration of strength. These symptoms continued the next two days, during which, he lay in bed and drank diluent drinks. On the 2d May, he presented the following symptoms:—face pale, and expressive of great anxiety—eyes dull—sensorial functions undisturbed—abdomen tense, and exquisitely painful on pressure, especially in the right side—frequent vomiting of bilious matters—obstinate constipation—tongue moist and white—pulse rather quick—skin hot and dry. *Venesection to* 12 *ounces*, 30 *leeches to the abdomen—fomentations—lavements.* The blood was inflamed. The pain was somewhat relieved. *May* 3*d.* Twenty leeches were applied to the abdomen. The vomiting ceased this day. 4*th.* All the symptoms were ameliorated; but the abdominal tension continued—hence it was inferred that the inflammation had passed into a chronic state. Simple *ptisans—fomentations—low diet.* That evening he received cold from a window which had been left open, and next day, he was found in articulo mortis, when the physician went round.

Dissection.—There was no appreciable lesion of the cerebro-spinal system, nor in the viscera of the thorax. In the abdomen, the peritoneal covering of the small intestines was remarkably injected, and a considerable effusion of whitish fluid in the hollow of the right ileum and in the pelvis. The stomach, liver, and colon, were covered with white concretions of a membraniform appearance. The mucous membrane of the stomach was pale. The same might be said of the small intestines, except a portion of ileum, near the ileo-cæcal valve, where the lining membrane was injected.

Remarks—The above case presents one of the finest specimens of uncomplicated peritonitis that can well be imagined, accompanied by well-defined symptoms. Here there was no apparent prodrome, or, as Dr. Marsh would say, "latent period," between sound health and violent disease. Pain was the first symptom, at first partial, and then more extended, with vomiting, and alteration of the features—all very characteristic of this dangerous kind of inflammation. The pulse here, as in many other cases, was deceptive, and its action not at all in proportion to the dangerous disease that was going on. The following case presents some curious traits.

Case 2.—A young man, 18 years of age, had enjoyed habitual good health, till the 2d of March, when, without any apparent cause, he was seized with sharp pains in the abdomen, not constant, nor always in the same place. He kept to his room for five days, but took no medicine. On the seventh day of his illness, he came into La Charité, presenting the following symptoms:—face flushed—abdomen distended and tense, without any fluctuation—great sensibility to pressure—pulse small, very quick, and rather irregular—skin hot and dry—tongue coated yellow—constipation. Notwithstanding the time that had elapsed since the invasion of the disease, depletion was determined on, and thirty leeches were applied to the abdomen, to which were added lavements and fomentations. The patient was greatly relieved, the abdomen becoming less tense and painful. Leeches were again applied. For three days the sickness at stomach ceased—and a diarrhœa came on. Still the tension and tenderness of abdomen evinced that peritoneal inflammation was going on. By the 12th day of the disease, the abdomen was considerably distended, and very painful. The hypogastric region was covered with leeches, which reduced the swelling and pain. On the 24th day, the patient demanded his discharge from the hospital, as they did not give him enough of food. He got up and dressed himself, but was unable to leave the institution. The next morning he suddenly expired, being the fifteenth day from the commencement of the symptoms.

Dissection.—The peritoneum was adherent to the convolutions of the bowels, by white and thick layers of recent formation. Beneath these the membrane itself was highly injected. There was considerable milky effusion in the pelvis. The internal surface of the stomach was pale. The same with the intestines. There was no other appreciable lesion in the body.

Remarks.—The above is another case of pure peritonitis, and is remarkable for the craving of food, and the suddenness of the death. These two cases prove, as do thousands of others, that the different tissues may be separately inflamed, though such doctrine is very much scouted by our high-bred routine physicians, who dislike the trouble of accurate investigation and close observation.

Case 3. *Peritoneal Inflammation succeeding Rheumatism.*—In a former volume, our indefatigable pathologist traced several cases of

pleuritis, pulmonitis, and pericarditis, to sudden cessations of acute rheumatism. He observes that it is of little use to cavil about the term *metastasis*, in such cases, provided we bear in mind the fact, that a *sudden* disappearance of articular inflammation is occasionally followed by phlegmasia of an internal organ—and especially the serous tissues of those organs.

Example.—A man, 57 years of age, was received into La Charité, labouring under acute rheumatism, which shifted from joint to joint. *Several venesections* were practised. One day, the rheumatism suddenly ceased in the articulations then affected, and did not assail any of the others. But acute pains were soon felt in the abdomen, which became so violent, that the patient was forced to send forth the most piercing cries. This appeared like *metastasis*, and sinapisms were applied to the articulations originally inflamed, while leeches in great numbers were clustered on the abdomen. Ultimately the patient was put into a warm bath. These means had no good effect—the pain invaded all parts of the abdomen, which enlarged much, and presented fluctuation. Death took place on the third day from the recession of the rheumatism.

Dissection.—As soon as the abdomen was opened a flood of reddish fluid issued forth, containing some floating flocculi. The intestines were intensely red, and adhesions were forming in various places. The effused fluid resembled venous blood, but there were no coagula. There was no affection of the mucous membrane of stomach or bowels.

A curious formation was discovered in the examination of this man. From the fundus of the bladder there went off an oval pouch, which reached and adhered to the duodenum. It communicated with the main body of the bladder by an opening resembling the pylorus. The structure of this pouch or appendix was, in all respects, similar to that of the bladder itself.

We think the most sceptical pathologist will hardly deny that there was here a transference of inflammation from the joints to the peritoneum. We observe that the patient was bled *several times* for acute rheumatism. We are daily astonished and grieved to see the want of discrimination in bleeding for acute rheumatism. The generality of medical men are now getting it into their heads that inflammation is inflammation, wherever seated—however designated; and, consequently, that there is but one class of remedies—venesection and decisive depletion. It is no wonder that, under such routine practice, we see so many examples of metastasis of inflammation to the heart. Another measure which is very generally had recourse to, in acute rheumatism, is the warm, or rather the hot bath. This is a most dangerous procedure. It determines the tide of the circulation strongly to the surface, no doubt—but there is a subsequent retreat of that tide, which often sweeps with it the inflammation from the joints to the interior. Of this we have seen examples which left no doubt on our minds as to the fact.

Case 4.—A curious pathological fact has, in these days of diligent investigation, been pretty fairly established—namely, that irritation or inflammation in the mucous membrane of the duodenum will sometimes produce jaundice, where no obstruction can be detected in the biliary ducts. This fact, we think, will ultimately throw some light on the nature of yellow fever. The following is an instance of this kind.

A female was confined, and the delivery was followed by profuse hæmorrhage. This was combated by cold applied to the hypogastrium, and by the introduction of *lemon juice into the cervix uteri.* On the fourth day, the lochia became suppressed, and the abdomen became the seat of severe pain. She was admitted into La Charité, her belly immensely distended and tympanitic, and accompanied by fever of the puerperal kind. Leeches and the usual means were employed, but without advantage. Next day she became completely jaundiced—and on the 3d day of the present illness she died.

Dissection.—Great quantities of gas were confined in the intestines—these last were covered with albuminous effusions—and whitish puriform secretions were collected in the pelvis. The mucous membrane of the stomach was pale; but that of the duodenum was inflamed. On minute examination, no affection or obstruction of the liver or its ducts could be detected. The internal surface of the uterus was inflamed.

Dr. Andral thinks that the tympanitis may have occasioned the peritonitis. But extrication and accumulation of air in the bowels are such usual attendants on peritoneal inflammation, that we can hardly regard it in any other light than as the *effect* of the inflammation.

Here we must quit the subject of *acute* peritonitis. The symptoms of this dangerous disease are nearly as unequivocal as those of any other inflammation, though the treatment is more difficult. It is chronic inflammation of the peritoneum which produces such havoc, and which so generally passes undetected till it is too late for remedy. There are many cases of chronic peritonitis, where the disease goes on to fatal effusion—to tuberculation—or to adhesion of the intestines into a mass, and yet no *pain* may have been complained of at any period of the disease. More generally, however, chronic, is a sequel of acute peritonitis. We shall be able to introduce but two or three cases, offering peculiar features, before we close this article.

Case 5.—A tailor, 24 years of age, was seized with abdominal pains, in the beginning of December, attended with diarrhœa. He kept his room for three weeks, and then came into La Charité. The abdomen was distended, and fluctuation was obscurely perceptible. The diarrhœa continued—the tongue was red at the point—vomiting—quick pulse—cough. Auscultation and percussion could detect no disease of the lungs; but they had no doubt of

inflammation, both of the peritoneum and mucous membrane of the bowels. *Leeches, fomentations, low diet.* During the next four or five days there was no diarrhœa, but the symptoms of peritonitis continued. During the remainder of January, the abdomen got larger, the pulse very quick, and the skin dry and rather hot. In the beginning of February, the cough increased, and some oppression was felt. The chest, however, sounded well, and the respiration was heard throughout, without any wheeze. He died, exhausted, on the 15th February.

Dissection.—The abdominal parietes were strongly adherent to the intestines—and there was an effusion into the abdomen, of a brown colour and fæcal odour. The small intestines were glued together, and covered with false membranes, which membranes were studded with tubercles. Beneath these membranes, the peritoneum was found of its natural colour and structure. Between the peritoneal and mucous membranes, a number of tubercles were developed, some of which were softened down, and had burst through the peritoneal covering. Within a few inches of the ileo-cæcal valve, the coats of the ileum had given way, and there existed a perforation. The mucous membrane of stomach and bowels was pale and healthy. There were some crude tubercles at the summit of each lung—and the pericardium was adherent to the heart by a thick layer of false membrane, studded with tubercles.

Remarks.—The above is a very well marked case of tuberculated accretion of the serous membranes, with effusion—all, no doubt, the consequence of chronic inflammation. This case also presents a specimen of perforation of the intestine, proceeding *from without inwards*, and caused by the softening down of tubercles. The following is another striking example of the ravages which chronic peritonitis is capable of effecting before death.

Case 6.—A shoemaker, aged 19 years, experienced, in the month of May, some acute pain in the abdomen, which did not, however, prevent him from work for some days. At last he took to his bed. There was pain on pressure, but no vomiting or diarrhœa. There was cough and fever every evening. In July, there came on a diarrhœa, and, on the 12th August, he entered La Charité. His face was pallid and swelled—some œdema of the ankles—pain about the umbilicus augmented by pressure—belly rather tumid and presenting fluctuation—three or four liquid stools daily—slight cough—quick pulse—morning perspirations—great emaciation of the thoracic parietes and the arms. In the course of the month of August, a strict regimen and fomentations entirely relieved the pain; but the cough increased—the diarrhœa continued—the perspirations became more profuse—the debility and marasmus made rapid advances, and the patient died on the 31st of the same month.

Dissection.—There were several ounces of serum in the pericardium, the heart itself being apparently sound—superior lobe of the left lung converted into a tuberculated mass, leaving scarcely a trace of parenchymatous structure. Numerous tubercles in the rest of the lungs. In the abdomen, a considerable quantity of yellow serum—epiploon greatly indurated and tuberculated—intestines glued together by false membranes, these membranes being studded with tubercles—internal surface of the stomach pale, except near the pylorus, where it was discoloured—an ulceration close to the ileo-cæcal valve above—and one or two below that apparatus. The valve itself was ulcerated, and a complete *perforation* of the coats effected.

The above case offers an instance, to which the attentive practitioner would often find parallels, where ulceration of the intestines takes place, attended with so little pain, that the disease would not be at all suspected. We believe, indeed, that in the present state of our knowledge, there is really no pathognomonic sign by which we can ascertain the existence of this dangerous—generally fatal malady! This uncertainty, however, should put us on our guard against that system of drastic purgation, now so indiscriminately put in practice by *routinists*, without thought or consideration.

Here our review of M. Andral's work must terminate, for the present. The work abounds with ample illustrations of abdominal inflammation, drawn from the clinical practice of a public hospital. They are highly deserving of attention. We are gratified to observe that, in all our medical discussions, in the various societies of this metropolis, the subject of pathology, as cultivated by our continental neighbours, is now exciting universal interest, and that what we have long urged in this Journal, is confessed with one voice—the superiority of continental pathology over that of this country. It is humiliating to observe the sneers with which our fashionable physicians, in this metropolis, regard the study of pathology. Dr. Hodgkin, in his paper on Medical Education, lately read and discussed at Guy's Hospital, alluded to the disgraceful fact, that —in the theatre of the Royal College of Physicians of London, a systematic attempt was made to depreciate the study of morbid anatomy! Such a fact will place us in a pretty light on the Continent! But we trust the present, and especially the rising generation, will wipe off this foul disgrace to science, and prove that Englishmen, when once aroused, will evince that native energy so strongly inherent in them, and show that they are not to be outdone in any pursuit, where the health and comfort of their countrymen are concerned.

From the Revue Medicale.

DROPSY OF THE KNEE, CURED BY PUNCTURE.

M. Villette was consulted, October 6th, 1826, for a tumour situated above the left

knee. The swelling was divided by the tendons of the muscles inserted into the patella, into two portions, of which the internal was the larger; the integuments preserved their natural appearance, and a distinct fluctuation was perceptible. From the previous history of the case, and the indolent character of the swelling, M. Villette was induced to suspect an accumulation of synovia in the joint, and directed the frequent application of cloths wet with a solution of the acetate of lead. On the following day, there was an increase in the temperature and tumefaction of the part, and some degree of pain was felt in the articulation. Frictions, with a fourth of a drachm of mercurial ointment, were directed morning and evening.

Oct. 8. There was little perceptible alteration in the size of the swelling, but towards evening the heat became almost insupportable; the pain extended along the sartorius to the groin, and the patient complained of a troublesome pulsation in the interior of the joint. The mercurial frictions were discontinued, and a large cataplasm with laudanum directed to be applied. 9th. The patient had been unable to sleep during the night, being tormented with severe and deep seated pains in the limb, these, however, left him towards morning; and upon examination at that time, the preternatural heat of the limb was found to have entirely disappeared. Three blisters were directed to be applied in succession around the patella. Notwithstanding these measures, the extravasation continued, and on the 12th, M. Villette yielding to the importunities of his patient, who threatened to make an incision into the joint himself, if an operation were longer deferred, introduced a trocar into the superior part of the tumour, and drew off eight ounces of fluid, possessing all the characters of synovia. The edges of the wound were carefully closed, and a compress and bandage applied.

13th. The swelling had almost re-acquired its original size, and though the knee was somewhat less painful than before, he complained greatly of pain in the hip joint. The compression was continued, and ice directed to the limb. On the 15th, the tumour having rather increased than diminished, it was decided to repeat the puncture, and five ounces of fluid, resembling that drawn in the first instance, flowed from the opening. Frictions with concentrated acetic acid were immediately made upon the knee, and it was afterwards enveloped in a large sinapism, which produced so much irritation as to require its removal after three quarters of an hour; it was re-applied in the evening, and continued twice that period.

October 16th. The patient had passed a tranquil night; the fluid had re-accumulated to a slight degree, and the skin, though very red, was much less sensible than before. A cathartic was directed, and on that and the succeeding day, two other sinapisms were applied. The catharsis was repeated on the 18th, with a view to the transfer of the inflammatory action; at this time the motions of the limb were quite free, and although a slight fluctuation was still perceptible, the pain had entirely disappeared; a repetition of the sinapism was directed, and M. Villette discontinued his visits, recommending the patient to continue the compression, and from time to time to renew the irritation on the surface by means of the mustard. None of these directions were attended to, and when M. Villette saw him again on the 31st, the effusion had returned to a considerable extent. Recourse was again had to the sinapisms, and with such effect, that by the following morning, the effused fluid was completely absorbed. Great pain however was still felt in the interior of the articulation, and the patient was unable to bear the least pressure upon the affected limb, without sending forth piercing cries. The warm bath, cataplasms, &c. were prescribed, and by the 4th November, the patient was entirely cured.

From the Journal des Progres des Sciences et Institutiones Medicales.

POISONING BY NITRIC ACID.

A young man, aged 18 years, of a very robust constitution, attempted suicide by swallowing two ounces of the nitric acid of commerce. He was immediately seized with burning pain of the fauces and epigastrium, which rapidly increased in intensity, and was followed at the expiration of fifteen minutes by vomiting and the discharge of a part of his breakfast, which he had eaten a short time previously. M. Leuret was sent for, and succeeded in persuading the patient to swallow two ounces of calcined magnesia, diffused in a large quantity of water; the first dose was given about twenty-five minutes after he had taken the acid. Deglutition, which was at first difficult, soon became more easy, the mouth was of a white colour, but not painful, and the pulse was slightly increased in frequency. Half an hour after the administration of the magnesia, the vomiting returned, consisting at first of a yellowish white matter, aliment, and subsequently a thick fluid of a brick red colour. The first efforts were accompanied by violent pain, and a state of indescribable anxiety, but these symptoms soon disappeared, and at the end of two hours, pressure upon the epigastrium produced scarcely a slight sensation of uneasiness; acute pain, however, was felt in the umbilical region, and the patient complained of coldness over the whole body. A warm bed was prepared for him, thirty leeches were directed to the abdomen, to be followed by emollient cataplasms, mucilaginous beverages, and enemata composed of a decoction of mallows. *Evening.* The vomiting still continued, but the pain was less intense; the patient had drank much, and appeared to be relieved by each repetition of the enema; the pulse was

somewhat elevated, and the epigastrium had again become painful. *V. S. was directed to the extent of six ounces, and twelve leeches to the epigastrium.*

Second day. The general condition of the patient is improved; the pain in the epigastric and umbilical regions is less acute; there is greater freedom of respiration, and less thirst than before; the vomiting of the brick coloured fluid occurred frequently during the night, and the same matter was perceptible in the alvine evacuations. The ptisans and enemata were continued, and linseed poultices were applied to the throat and abdomen; during the day, there was a slight accelleration of the pulse, the throat became extremely painful, and bile was contained in the matter ejected by vomiting. *Twelve leeches were directed to the throat.*

Third day. There is a still greater melioration of all the symptoms; the pain in the epigastric and umbilical regions is felt only occasionally, and several slight attacks of colic have been relieved by the enemata; detachment of the epidermis has commenced on the sides and extremity of the tongue, and in the matter ejected from the stomach several portions of a membranous appearance are visible. Toward evening, the pulse increased in frequency, attended with an augmentation of thirst; the pain in the throat still continues severe, and the epidermis is entirely detached from the tongue, leaving this organ red but not painful. *Ten leeches to the throat.*

Fourth day. The pain was much diminished by the application of the leeches, and the patient slept nearly the whole night; there is no pain in the abdomen, the respiration is quite free; the patient complains only of nausea and a bitter taste in the mouth; the pulse is slightly accelerated, thirst, &c.; this favourable state continued throughout the day.

Fifth day. During the night, the patient had a copious alvine evacuation of brownish matter, and vomited in considerable quantity the brick coloured fluid already mentioned. From this period convalescence advanced apace, the various functions were successively re-established, and by the eighth day, the cure was considered as having been accomplished.

From the Journal des Progres des Sciences et Institutions Medicales.

NON-MERCURIAL TREATMENT OF SYPHILIS. (Communicated by M. Ganther.)

Dr. Fricke, of Hamburg, after a long series of experiments made in the general hospital of that place, has at length published the results of his observations on the non-mercurial treatment of this disease. The regulations of that hospital particularly adapt it for observations of this nature; the venereal patients are long subjected to the examination of the physician, and he is consequently enabled to ascertain with more correctness than he could otherwise do, the frequency of secondary symptoms. With some slight modifications, the method of treatment adopted, was the same with that recommended by Dr. Thompson of Edinburgh. In every instance, venesection to the amount of from six to eight ounces, or more, according to circumstances, was prescribed, and repeated, if the plethoric condition of the patient, local inflammation, &c. rendered it necessary. Saline laxatives, a rigorous diet, and repose in a horizontal position, were deemed indispensable to a perfect and speedy cure. The local treatment of chancres consisted in the frequent application of linen, wet with a solution of acetate of lead, which was afterwards changed for the sulphate of zinc, two grains to six ounces of distilled water, and finally, when the ulcer had been brought to a proper condition, lime water and the black lotion were substituted. If these applications occasioned too much irritation, they were still further diluted, or recourse was had to those of a milder character. When the chancres were complicated with phymosis, ulceration and œdema of the prepuce, corrosive sublimate in the proportion of from one and a half to two grains, in six or eight ounces of water, was employed, and the vitriolic solution was injected between the prepuce and glans. The resolution of buboes was attempted by means of compression, and this plan often succeeded even when suppuration had already taken place; where it failed, the bubo was opened, and its cavity dressed with lint, moistened in one of the above mentioned solutions; if cicatrization advanced slowly, a digestive ointment was used, or the ulcer was touched with the nitrate of silver. The bistoury was also employed to remove excrescences; in some instances, corrosive sublimate or other caustics were preferred;—the wounds left by their removal were treated as common chancres. If the disease did not yield to the treatment above indicated, and especially if it appeared to augment, mercury was exhibited in minute doses, and generally produced a prompt alleviation of the symptoms. Dr. Fricke rarely employed the decoctions of sarsaparilla, guaiacum, and other sudorific beverages. In support of this method of treatment, it may be alleged, 1st. That the primary symptoms were more speedily cured, than by the employment of mercury. 2d. The unpleasant consequences sometimes occasioned by that mineral were avoided; and 3d. The cicatrices presented generally a better aspect.

It was observed, 1st. That the ulcers generally healed sooner in females than in males; a circumstance accounted for by their earlier admission into the hospital, their more attentive observance of the commands of the physician, and the less frequently complicated state of the disease; females, moreover, rarely presented more than two chancres, while in males they generally exceeded that number, and the employments, habits, &c. of the latter, rendered them more liable to inflammation.

2d. The quickness of the cure did not so much depend upon the number of chancres, and their well marked syphilitic character, as upon their situation, the attending inflammation, and the constitution of the patient. Ulcers with a brownish base, reverted edges, and those also seated near the orifice of the urethra, and upon the frenum, generally healed slowly. The occurrence of gonorrhœa during the inflammatory period, arrested the progress of the chancres; they advanced, on the contrary, more rapidly during the flow of the catamenia.

The secondary symptoms have not, in every instance, been treated in this manner; it has been successful, however, in the small number who have been submitted to it. In one case, ulceration of the throat was cured in five days, and in two others at a somewhat longer period. In females, chancres of three or four lines in diameter, generally healed in the space of from seven to twenty-one days. In the other sex, they most commonly remained stationary from fourteen days to a month, unattended, however, with pain; after that period, they gradually became cleaner, healthy granulations formed upon their surface, and the cure was completed in ten or fifteen days. Some degree of induration occupied the situation of the chancres, but this speedily disappeared, and the cicatrices were scarcely perceptible. Buboes after having been opened, generally healed slowly, suppuration ceased, the margins of the ulcer became indurated and assumed a bluish aspect; the granulations were large, florid, and presented the syphilitic tint. In about three weeks, the cavity began to diminish by the approximation of its edges; the granulations assumed a healthy appearance, and traces of a simple incision, were all that remained after its cicatrization. The observations upon tubercles have been too limited to determine positively, whether they would return after having been removed by the scalpel, as ordinarily happens, notwithstanding the internal and external use of mercury; in several instances, three weeks have elapsed without their re-appearance. Such are the results obtained from the general hospital at Hamburg. In relation to consecutive symptoms, observations still require to be multiplied, in order to enable the reporters to form any satisfactory conclusions. Greater difficulty is stated to attend this mode of treatment in males than in females, by reason of the more refractory dispositions of the former, which induce them sooner to demand their discharge; the greater number too, are either sailors or travelling labourers, so that they are not often seen after having been discharged cured of the primary symptoms.

M. Ganther terminates his report with the hope, that the German physicians, whose industry and love of truth are so well known, will devote themselves to the investigation of the merits of this plan of treatment, either to the exclusion of every other, or associated, as has been done by Dr. Fricke, with minute doses of mercury.

From the Medico-Chirurgical Review.

CASE OF EMPHYSEMA OF THE SUBSTANCE OF THE HEART; WITH OBSERVATIONS ON VALVULAR DISEASE OF THE SAME ORGAN.

A very curious case of this rare disease came lately under the care of Mr. Morrah, of Sloane street, and was attended by that gentleman and Dr. Johnson. The patient was a captain in the Royal Navy, aged about 52 years, who had met with some misfortunes a few years ago, and afterwards began to evince symptoms of disordered action of the heart, namely, dyspnœa on going up stairs, and irregularity of the pulse. These symptoms gradually increased, till, at length, he was confined to his bed-room, though never to his bed. About four months ago, when examined carefully with the stethoscope, the heart was found to beat over a large space, and to be very tumultuous and irregular in its action. The whizzing sound was also very audible, when the ventricles contracted. The contraction could frequently be heard through the stethoscope, when no corresponding pulse was felt at the wrist. Thus, when not more than 50 or 60 strokes of the pulse could be enumerated, and those very irregular, there might be heard 70 or 80 contractions of the ventricle. The respiration was audible in all parts of the chest, except in the region of the heart, which occupied a large space, and consequently prevented the breathing being heard in that quarter. At this time, there were alternate paroxyms of dyspnœa and calm breathing, the intervals varying from a few minutes to as many hours. The night, however, was very distressing, as he could not lie low in bed, and his sleep was disturbed by startings and sense of suffocation. There was nothing very particular in the other functions. His dyspnœa was generally relieved by bleeding, local or general, with blisters, aperient medicine, and low diet.

The diagnosis was, enlargement of the heart, and imperfection of the valvular apparatus, without any material affection of the lungs. For two months before this unfortunate gentleman's death, his sufferings were very great, especially in the night. His time was passed in alternate paroxysms of dyspnœa, threatening every moment his life, and then sudden sessation of the attack, with an interval of *complete freedom from all dyspnœa.* It was very curious to observe that the interval (for more than a month prior to death) was almost invariably twice as long as the paroxysm. Thus, if the dyspnœa lasted five minutes, the patient had a complete immunity for ten minutes afterwards. The accessions were, like the cessations, *instantaneous.* He would be conversing quietly with his wife, his children, or his medical attendants, and in the very midst of a sentence, or even of a word, he would be seized with such a panting for breath, that a stranger would suppose he was in articulo-mortis. Equally sudden and abrupt would be the termination of this terri-

ble conflict; and then he would take up the sentence or the word where it had been interrupted by the paroxysm.

Towards the close of the scene—that is, for the last three weeks of the patient's life, there were evident symptoms of effusion in the chest, as well as œdema of the lower extremities. Then the respiration could not be heard below the middle of the thorax, in the perpendicular position, though it was quite audible all round the superior parts of the chest. He suddenly expired while conversing with his daughter, in one of the intervals of dyspnœa, on the 23d of October, as he was sitting in his arm-chair. The body was examined on the 24th, by Mr. Morrah, Dr. Johnson, and Mr. Stevenson, of the Edgeware Road.

There was very considerable effusion, amounting to several pints, in the two sides of the chest. The heart was nearly three times its natural size—all its cavities being greatly dilated, but its parietes not being increased in proportion. The auricles were nearly of their natural thickness, though their cavities were considerably augmented. The right ventricle was passively enlarged. Its parietes were thinner than natural, though its cavity was more than double its proper size. The cavity of the left ventricle was also more than double its usual dimensions, but the parietes presented certain remarkable appearances. In some places, they were full an inch in thickness—in others, not a quarter of an inch. Near the apex of the left ventricle, the muscular structure was white, and condensed into a substance almost as firm as ligament. Between this and the basis of the ventricle, there were some portions of the walls not more than a fifth of an inch in thickness. The basis of the ventricle, on the contrary, presented parietes full an inch in thickness—but this thickened portion was every where emphysematous, and air could be pressed from it, with a crackling noise, exactly as from a piece of lung. By firm and continued pressure these thickened parietes could be reduced to less than half their dimensions, when the air was completely expelled.

The openings between the auricles and ventricles, on both sides, were greatly enlarged. The auriculo-ventricular opening, for instance, on the left side, was at least an inch and a half, or two inches, *in diameter;* and, as the mitral and tricuspid valves showed no increase of dimensions, it was manifest that the functions of these valves were very imperfectly performed. When the left ventricle, for example, contracted, a great portion of the blood must have passed back into the auricle, from the inability of the mitral valve to cover the auriculo-ventricular opening. This would satisfactorily account for the pulse at the wrist not always being felt in correspondence with the ventricular contraction, as heard through the stethoscope. The same imperfection must have existed in the right side of the heart. The right ventricle, instead of throwing its blood completely into the pulmonary artery, ejected a portion of its contents back into the auricle. Thus the venous blood from the larger circulation was retarded, and eventually led to dropsical effusions; while the blood returning from the lungs to the left side of the heart must have experienced great interruption, and, consequently, the vessels of the lungs were kept in a state of congestion.

The emphysema of the parietes of the left ventricle cannot be accounted for on any known principle of the animal economy, but the fact is undeniable. The lungs themselves were crepitous, and sound throughout.

In respect to the tumultuous noise which was heard in this case, through the stethoscope, it resembled more the noise of churning, than that which has been compared to the purring of a cat—the stroke of a saw—or the blast of a small pair of bellows, by Laennec and others. There can be little doubt that it was produced by the regurgitation of blood from the ventricles into the auricles, at each ventricular contraction, owing to the inability of the mitral and tricuspid valves to close completely their respective auriculo-ventricular openings. To render imperfect the office of the valves of the heart, it is not necessary that they themselves should be indurated, puckered, or otherwise changed in structure. If the opening which the valve is designed to cover be unnaturally dilated, the same effect will be produced as if the valve were ossified or contracted; and this is a pathological condition which is often overlooked. On examining very carefully those hearts which have been morbidly dilated in their cavities, whatever was the condition of the parietes, it appeared to the writer of this, that the valves were almost always incapable of effectually covering their respective apertures, and, therefore, that the circulation of the blood through the heart was imperfectly carried on. If the *right* chambers of the heart be much enlarged, and the valvular apparatus be consequently damaged, there will be no irregularity of the pulse, for that depends entirely on the *left* ventricle; but there must, in such a case, be great derangement of the general venous circulation, and the ultimate tendency to serous effusion will be consequently established, however regular the pulse may be at the wrist. If, in such cases, we could feel the pulmonary artery, we would find intermissions of pulsation there. When the left chambers are dilated, and the valvular function impaired, the venous system of the lungs must necessarily be kept in a loaded state, and hence the dyspnœa which invariably attends this pathological condition of the heart. Hence, too, the temporary relief, which the breathing experiences from bleeding, and other kinds of depletion.

From the Medico-Chirurgical Review.

REMARKABLE DISEASE OF THE EPIPLOON.

The following melancholy case is recorded by Dr. Strambio, in an Italian journal, (*Annali di Med.*) with the appearances on dissection.

A young woman, 18 years of age, after enjoying herself at a carnival ball, began to complain of pains in the right side of the abdomen, which increased in size, and led to the suspicion that she was pregnant. Various medicines were ineffectually administered, and when M. Strambio was consulted, the patient presented the following phenomena:—face pale—pulse hard and frequent—skin burning hot—vomiting when food was taken into the stomach—abdomen large, but more so in the right than in the left side. On examination, several indolent tumours were felt, which were not painful unless strongly pressed. The left mamma was shrunk, and the right more enlarged than natural, as well as hard. There was supposed to be inflammation of the stomach, and depletion was practised, locally and generally, with fomentations, &c. It was found that a tumour pressed on the rectum, and prevented the introduction of a pipe, or the finger. All the symptoms increased in severity, and hydrothorax supervened, with infiltration of the left lower extremity. Death soon took place.

On dissection, a large effusion was found in the chest, and also in the pericardium. The omentum, detached from the viscera to which it naturally adheres, was degenerated into an elastic substance, resembling brain rather than fat, occupying the whole of the abdomen, and disposed into masses of various sizes, connected by prolongations of the original omentum or membranous stripes. The left kidney, the spleen, the abdominal aorta, the rectum, the ovaries and the uterus, were involved in this morbid mass. The other organs were unaltered. The disease was considered to be caused by a chronic phlegmasia of the epiploon, excited by a fall which the young woman had experienced about a year before her death.

From the Edinburgh Medical and Surgical Journal.

Notes of a Case in which the Canal of the Larynx, after being nearly obliterated, was re-established. By Robert Liston, Esq. Surgeon, Lecturer on Surgery, &c.

Elizabeth Oswald, æt. 27, in attempting suicide in September, 1826, had wounded the larynx through the crico-thyroid ligament.

She was under treatment for some months, and was at length abandoned with the loss of voice, and breathing entirely through a silver tube introduced in the situation of the original wound. On withdrawing this tube, and examining the parts attentively, a very minute orifice, capable of admitting the point of a probe of half the usual size, was discerned leading towards the glottis.

About April 15, 1827, Mr. Liston saw her by the request of Mr. Sidey, who had attended much to the case from the first, and began to introduce bougies about the size of darning needles into the part of the trachea above the wound; and by gradually increasing the size of the bougies the passage was brought about the end of June to its natural diameter. About the middle of August the lower part of the trachea was dilated by a tube gradually increased in size, so that one of sufficient diameter might be passed by the mouth.

Three weeks afterwards the short tube was removed, and a long one was introduced by the wound up into the mouth, there laid hold of and pushed down into the trachea. This was followed by a very severe fit of coughing, which lasted about half an hour.

This tube, which was about nine inches long, and equal in diameter to that of the largest œsophagus tubes, was retained in the windpipe for fifteen days, during which it caused great salivation, which loosened the teeth and extremely reduced the strength of the patient. In consequence of this it was necessary to use some active means for the closure of the wound. On the fifth day the cicatrix was dissected out by two elliptical incisions, and the edges of the wound united by suture. The tube being removed on the fifteenth day, (October 5th,) she breathed well. In the morning, however, her breathing became very difficult, and *tracheotomy* was performed, and a silver tube introduced, which was kept in five days, and then replaced by a smaller one.

The actual cautery was applied to the edges of a small sinus, which remained on October 17th; and on the 26th it was re-applied to the opening, which had very nearly closed. On the 28th the tube was removed; and a few days after the wound was completely closed. The woman now breathes with comparative ease through the larynx, and is slowly recovering the use of her voice.

From the Edinburgh Medical and Surgical Journal.

STRICTURE OF THE LACHRYMAL DUCT. By Thomas Pridgin Teale, Esq. Surgeon to the Leeds Public Dispensary.

During my attendance at the Hôtel Dieu in 1823, I was highly gratified by the success of M. Dupuytren's treatment of stricture of the lachrymal duct.

In the operation adopted by that distinguished surgeon, the use of the canula of Foubert and Wathen has been revived; but their mode of operating has been considerably modified and improved the operation of M. Dupuytren, consisting simply of inserting into the lachrymal canal a metallic tube, over which the integuments are to be healed. The general success attending the operation was such as particularly to arrest my attention; but I am unable from my own observation to state the average number of cases in which it proved successful. M. Dupuytren, however, states the result to be favourable in nineteen cases out of twenty.

Although by reasoning upon the subject we may be unable to conceive "how a metallic tube can be expected to form a substitute for the natural duct, an inorganic in lieu of an or-

ganized part, in perpetuity," * yet, when experience is opposed to speculation, the latter should certainly be abandoned.

Various measures have been at different times adopted for relieving this disease; but all of them have proved more or less unsatisfactory.

The antiphlogistic treatment in favourable instances frequently relieves the thickened state of the membrane lining the duct, and the passage for the lachrymal secretion sometimes becomes restored. But this plan of treatment often fails to relieve the obstruction, even when pursued for a considerable length of time; and in those cases where it proves successful, the progress of the cure is often tedious, and requires considerable patience and perseverence both on the part of the surgeon and his patient. The various methods devised for dilating the passage by probes and other mechanical contrivances, and for re-establishing the canal by setons, are objectionable, from the frequent failures which occur, and from the repeated operations which many of them require. The employment of the nail-headed style, which probably is the operation most frequently adopted by British practitioners, is likewise attended with considerable trouble and inconvenience. In the early days of its employment, the removal and re-insertion of the style, which from time to time is necessary, cause considerable annoyance, if not pain to the patient; and even when the final result is favourable, permanent deformity is produced either from the establishment of a true lachrymal fistula, or from the instrument being visible at the inner angle of the eye.

Over these different methods of treatment the operation of M. Dupuytren, although not entirely free from objection, nor invariably successful, possesses, in my opinion, numerous advantages.

1st, In the facility of its performance.

2dly, In the immediate and complete relief of the disease, at least in an immense majority of cases, M. Dupuytren stating (as I have before observed) the result to be successful in nineteen cases out of twenty.

3dly, In the prevention of any permanent deformity, it being nearly impossible in most instances to discover on which side the operation has been performed.

The operation which I am about to describe is undoubtedly well known to numerous British surgeons, and is probably practised by several. But as it is far from being generally adopted, or even known to the greater part of the profession, I have been induced to draw up the following description of it, and to lay before the public the result of the few cases in which I have adopted it.

The instruments employed in the operation are a common French bistoury, a canula of silver, gold, or platina, and a *porte-canule*, to which the canula is affixed for being more conveniently inserted in the lachrymal passage. The length of the canula is one inch; its upper opening measures one-tenth of an inch; the tube gradually tapers from its upper to its lower opening, the diameter of which measures one-twentieth part of an inch; the lower opening is placed obliquely, and the upper opening is surrounded by a small rim to prevent its sinking too low into the duct.

The following is the manner in which the operation is performed. The patient being seated in a chair, rests the head against the breast of an assistant, who fixes the head by a hand placed over the ear and temple on each side. The operator (supposing the left eye to be operated upon) stands in front of the patient, and a little to the left side. With the index finger of the left hand he puts the integuments at the inner angle of the eye upon the stretch, for the purpose of rendering the tendon of the *orbicularis palpebrarum* more evident, at the same time that the assistant who holds the head stretches the integuments at the outer angle of the eye. The lachrymal sac is then to be punctured by the point of the bistoury being inserted immediately below the tendon of the *orbicularis palpebrarum*. The direction in which the instrument should be inserted is nearly vertical, the handle inclining slightly to the opposite side, and a little forwards, on account of the projection of the eyebrow, the edge of the blade being directed obliquely downwards, or towards a point situated midway between the angle of the mouth and the pinna of the ear, this being the direction which admits of the bistoury being insinuated to the greatest extent down the lachrymal canal. The puncture being made, the bistoury is allowed to remain as a director, and the operator taking in the left hand the porte-canule, armed with the canula, gently insinuates the tube along the side of the bistoury into the lachrymal canal; the bistoury is then withdrawn; slight pressure is made upon the upper part of the canula, so as to cause it to be completely imbedded in the canal. The operation now being completed, the patient is directed to blow down the nose at the time that pressure is made upon the nostrils, by which the tube is freed from any blood that may have accumulated in it, and the air issues out at the incision, showing the free communication that is established between the nostril and the sac.

Case I. February 1827.—Martha Soward, æt. 25, has been long troubled with severe attacks of inflammation of the lachrymal sac, and in the intervals has suffered much inconvenience from the epiphora which remained. At present the sac is distended; the integuments inflammed, and conjunctiva red. Slight relief has occasionally been procured by the application of leeches, wet cloths, and fomentations, and by the use of aperient medicines. For the last few weeks the same treatment has been adopted, but with less relief than usual.

February 11.—Canula inserted.

12.—Considerable swelling and pain in the lower eyelid and cheek. Ordered to apply leeches and fomentations, and to take a dose of senna and Epsom salts.

* Travers's Synopsis.

16.—Inflammation diminishing.

21.—Swelling subsided; conjunctiva less inflamed than it has been for weeks previous to the operation; the tears continue to flow over the cheek.

27.—She still experiences slight attacks of inflammation, and the tears flow over the cheek. From these circumstances I supposed the tube must have been obstructed. The tube was consequently removed and a fresh one inserted.

May 20.—She feels no relief from the second operation; the ophthalmia occurs with its former violence and frequency, and the epiphora remains undiminished; the head of the tube is protruded upwards against the cicatrix. An incision was now made into the sac, and the tube extracted without any difficulty. The patient has since left the town.

I believe the employment of Ware's style would in this case have been equally unsuccessful, from the great irritability of the parts.

Case II. February 1827.—Mary Hudson, æt. 30, four years ago suffered from inflammation of the left lachrymal sac; suppuration took place; the matter was evacuated by puncture, and the wound closed in about nine months. Since the commencement of the attack the tears have continued to flow over the cheek, and the sac has repeatedly become distended. The principal inconvenience of which she complained was the dimness of vision which frequently occurred from the excess or accumulation of the lachrymal secretion on the globe of the eye and between the palpebræ.

Feb. 20.—Tube inserted.

21.—Wound united; slight swelling of the lower eyelid.

24.—Swelling subsided; wound healed; tears flow down into the nostil; she feels perfectly relieved of the annoyance she has so long experienced.

October 11, 1827.—She has continued perfectly free from inflammation and epiphora since the operation.

Case III. May 1, 1827.—James Smith, painter æt. 39, has been troubled with watery eye during seven or eight years. During the last two years there has frequently been a tumour at the inner angle of the left eye, which for three months has been permanent, and sometimes as large as a small nut. The watering of the eye has caused him much inconvenience, and when employed in his business he is repeatedly under the necessity of wiping the tears from the eye and cheek to prevent the dimness of vision which the presence of the tears occasion.

May 1.—Canula inserted.

2.—Considerable swelling of lower palpebra and cheek; slight pain. Ordered to apply rags wet with cold water, and to take an aperient.

6.—Swelling entirely subdued; dimness and watering perfectly relieved.

October 11.—Has not experienced the slightest inconvenience since the insertion of the tube. On showing him to-day to some medical friends, they were unable to say on which side the operation had been performed.

Case IV. September 11, 1827.—Hannah Proctor, æt. 27, has had obstruction of the left nasal duct during six months, and has suffered great inconvenience from distention of the sac and dimness of vision.

September 11.—Tube inserted.

13.—Wound healed; no swelling; epiphora relieved.

18.—Continues perfectly well.

Case V. September 19, 1827.—Mary Dixon, æt. 72, had inflammation of the left lachrymal sac nine months ago, and since that time the tears have constantly flowed over the cheek. She has suffered considerable inconvenience from frequent attacks of ophthalmic distention of the sac, and dimness of vision. The sac has never suppurated,

September 19.—Canula inserted.

21.—Slight redness and swelling of lower eyelid; dimness of vision and epiphora perfectly relieved.

26.—Inflammation quite subsided. She expresses her gratitude in the warmest terms for the relief she has obtained.

GANGRENE OF THE LUNGS.

The following case of this disease we find in the Revue Médicale, reported by M. Martinet from the Hôtel Dieu.

A man, 45 years of age, of a robust constitution, was attacked about the end of March, 1827, with a pleuropneumony of the right side, which being relieved by an appropriate treatment, permitted him to recur to his ordinary avocations. Towards the middle of May, he perceived an acute pain near the lower part of the sternum, which after a few days was attended with cough and an expectoration of sanguineous sputa, that soon became excessively fetid. Pain in the right side of the thorax accompanied with fever, next made its appearance; and the disease continuing its progress uninterrupted by general and local depletion, the patient applied for admission into the Hôtel Dieu on the 6th of June. The following were the symptoms then presented. Cough, attended with copious expectoration of a brownish matter, of an infectious, pungent and metallic odour; breath excessively fetid even to the patient; respiration generally profound, but accelerated by the cough. The air permeates readily the right lung, with the exception of a part in the vicinity of the superior angle of the scapula, where it appears to pass through a larger channel, and a mucous râle is occasionally perceptible; these phenomena were not observed in the corresponding portion of the left side. Thorax generally sonorous, somewhat less, however, on the right side and towards the posterior part, especially about the infra spinal fossæ; no pain in the breast, even while coughing; abdomen tender to the touch, *epigastralgie*, pulse slight-

ly accelerated, but neither full nor weak; with the exception of debility and pallor of the countenance, the general condition of the patient did not appear much disturbed. *Blister to the right side and posterior part of the thorax; jalap with* ℈j. *ext. cinchonæ; gum water for drink.*

This treatment was continued until the 10th; at that period the fetor of the sputa had disappeared, they had lost their brown colour, and consisted of a white, opaque and well concocted matter. The general health of the patient was good, there was no longer pain in the abdomen, and the fever had left him. 11th. The sputa, though diminished in quantity, have recovered their former fetidity. Respiration is perfectly free, a mucous râle is still perceived towards the angle of the right scapula. *A vessel filled with a solution of chloride of soda, was placed near the patient, to diminish in some measure the excessive fetor.* These symptoms continued for many days, the sputa reacquired their brown colour, increased in quantity, and were mixed with a liquid saliva; the stench was almost insupportable, and was considered by all as indicative of gangrene. In the portion of lung corresponding to the angle of the right scapula, where the respiration had always been more feeble than in other places, the air appeared to pass through a channel of considerable dimensions; at this point there was no pectoriloquism, though the voice was distinctly heard. Towards the termination of the month, an improvement had again taken place in the appearance of the sputa, respiration was perfectly re-established on the right side, and the condition of the patient improving daily, he left the hospital about the middle of June, in a state of health.

Without positively affirming that the above was a case of pulmonary gangrene, the assemblage of symptoms appears sufficiently to justify such an opinion. The patient had previously laboured under pneumonia. A relapse was the consequence of renewed exposure, and demanded the employment of venesection, cupping, &c. These measures removed the pulmonary congestion, and arrested the progress of the inflammation, which appeared to have been of small extent, since, at the time we examined him; the superior portion of the right lung was the only part affected. The fetid odour of the sputa continuing for so long a time, their brown colour, and the increased vocal *résonnance* towards the angle of the right scapula, sufficiently indicate a rapid degenerescence of this part, the march of which, together with the abscence of tubercles, can only be reconciled with the existence of gangrene. If the prostration which usually attends this affection, were not present in the case related, it was owing to the small part of the lung involved; and we know that every disease of this organ, whatever may be its mode of action, provided it be limited to a small space, has little influence upon the general health. A case similar to the above is related in the second volume of the *Clinique* of M. Andral.

From the Bulletin des Sciences Medicales.

CASE OF A FŒTUS EVACUATED BY THE RECTUM. By M. V. G. Malacarne.

Angela Cesaretti, had had a pregnancy which terminated naturally, and subsequently three abortions; she became pregnant a fifth time, but without being able to determine the precise period. In the month of March, 1816, labour pains supervened, but disappeared at the expiration of two days. The patient said she had felt a sensation of something giving way within her, after which the waters were discharged, and indeed the midwife found her bathed in them; a small quantity of an extraordinarily fetid blood was also evacuated. The neck of the uterus was very high, and the orifice entirely closed. The pains did not return, the breasts became tumefied, and puerperal fever accompanied by violent nervous symptoms made its appearance. On examining the abdomen, a hard, renitent and immoveable tumour was observed, slightly directed towards the right side. The fever disappeared, and the pain in the side greatly lessened. At the end of fifteen days, there was a discharge per vaginam, of a greenish viscous matter, which had the odour of mould, occasionally accompanied by a little blood. These symptoms diminished after the lapse of three months. In June, 1819, after the menstrual discharge, there was evacuated per vaginam, a fluid, at first yellow, afterwards of a blackish colour, together with shreds of putrid flesh. The pains reappeared in about three months, and again left her. Seven months after, she again became pregnant. The pains returned, increased with gestation, and extending to the right thigh, produced lameness. The excretion of urine was difficult and painful, and the patient experienced an unpleasant sense of weight in the abdomen. The discharge of a dead and putrefied fœtus dissipated all these symptoms. In the beginning of October, having taken an enema to relieve some colic pains, a fragment of bone was returned with it, and during the following days, several others were found in the stools; recourse was had to a surgeon to extract several which were implanted in the internal coat of the rectum, and a parietal bone, left temporal, the ribs and maxillæ, were successively removed. The femora and tibiæ made their appearance by the same route, at periods more or less remote. A recto-vaginal fistula had formed in the interval, but in July, 1821, the abdominal tumour had disappeared, fæces ceased to pass per vaginam, appetite and strength returned, and the health of the patient was entirely re-established.

From the Archives Generales de Medecine.

LIGATURES OF THE EXTREMITIES IN CERTAIN PERIODICAL DISEASES. By M. Bourgery, D. M. P.

Compression of the vessels of the extremities in the treatment of intermittent fever, long since introduced to the notice of the profes-

sion by Mr. Kellie of Edinburgh, has been more recently successfully employed in France, and M. Bourgery has just published a memoir on the subject, containing additional evidence of its remedial powers in this and other diseases. From the different mode, however, in which it has been applied in the two countries, one might be led to anticipate no little diversity in its consequences; Mr. Kellie employed the tourniquet in such a manner as to compress two principal arteries, the iliac and subclavian, and thus entirely arrested the circulation through the extremities; in France, on the contrary, a broad ligature is applied round each of the limbs, sufficiently tight to prevent the return of blood by the veins, while the circulation through the arteries is uninterrupted—in the former method, the blood is accumulated in the left cavities of the heart; in the latter, its return to the right side of that organ is prevented. In either case, when the compression is continued a sufficient length of time, syncope is the result—an effect referrible to the different states of plethora and vacuity of the heart; in fact, when the tourniquet is applied to the arteries, there is an augmentation in the strength and hardness of the pulse, suffusion of face, hurried respiration, and impending syncope from the congestion of the thoracic and cerebral vessels; while in compression of the veins, the diminished energy of the circulatory and respiratory systems, quickly followed by a sensation of coldness and debility, and the nausea which precedes the syncope, indicate as the cause of this phenomenon, a diminution in the quantity of the habitual stimulus of the heart.

At the commencement of a paroxysm of intermittent fever, there is an accumulation of blood in the internal organs, and if, as frequently happens, one of these should be suffering under latent inflammation, it becomes more particularly the seat of the congestion, and thus complicates the paroxysm, by the symptoms peculiar to its own condition. Under these circumstances, when the ligatures are applied, a large quantity of blood is immediately withdrawn from the circulation, and an effect produced, similar to that which would result from a copious venesection, but much more considerable, inasmuch as the depletion is more rapidly made, and to a greater extent, than in that operation. After the lapse of about half an hour, the ligatures may be successively removed, at intervals of two or three minutes, in order that the system may not be disturbed by the sudden afflux of a large quantity of blood, and the paroxysm will have been prevented, without having weakened the patient by venesection, or impaired the functions of the stomach, by the administration of remedies more or less stimulating.

It would appear that the employment of ligatures in these cases, is of ancient date in England; M. Bourgery is acquainted with a native of that country, for the last forty years, principal of an extensive manufactory in Normandy, who has been in the habit of curing, in this manner, the disease among his workmen, from observation of its beneficial effects previous to his emigration; and it has long been used as a popular remedy in Wales. In France, MM. Lallemand, Martinet and Rebouam, have published cases equally conclusive in its favour, but M. Bourgery appears to have been the first who has extended its employment to other diseases, in the treatment of which, it has, in his hands, always been productive of considerable advantage, less however, as a principal, than an useful auxiliary.

The proper time for the application of ligatures, in intermittents, is the first approach of the paroxysm, when the patient begins to feel a slight sensation of chilliness; two or three turns of a bandage should be made on the superior part of the limb, sufficiently tight to interrupt the circulation through the superficial veins, and impede, in some measure, the flow of blood through the more deeply seated vessels. The local symptoms are nearly the same in all cases; distention of the subcutaneous veins, tumefaction and discoloration of the extremity, quickly followed by numbness, an unpleasant sensation of prickling, and tremor of the muscles; after some minutes, if ligatures have been applied upon all the limbs at the same time, pandiculations make their appearance, the face is pale, the patient is troubled with nausea, complains of an universal coldness, and unless one or more of the ligatures be loosened, syncope takes place, at the expiration of five or ten minutes. In order to obviate these inconveniences, M. Bourgery has confined the application of the ligature to two of the extremities at the same time, and with equally beneficial consequences. When the numbness, &c. begins to be painful, they are placed upon the two others, and after a short period, those first applied are removed; this method, moreover, possesses advantages, when it becomes necessary to continue the ligatures during a considerable space of time.

The most usual consequence of their first application, is the suppression of the cold stage, and the superinduction of the hot, followed as usual by perspiration; this however does not always occur. After the second application, there is generally no farther return of the fever; in one patient only, out of seven, M. Bourgery was obliged to repeat the ligatures the third time. An evident reaction followed their removal, the pulse became fuller and more frequent, the countenance flushed and animated, and where local pain had previously existed, it either entirely disappeared or was much diminished. These beneficial results are only obtained when the remedy is properly timed; from experiments made by M. Rebouam at the Hôtel Dieu in 1820, he was nduced to conclude--1st. That applied after reaction had taken place, the operation of the ligatures was scarcely perceptible; they diminished slightly the violence of the symptoms, and shortened the duration of the fit, but without evincing any influence over the return of the succeeding paroxysm. 2d. In the inter-

mission, and immediately after the hot stage, their employment was injurious; the syncopes were more frequent, reaction did not follow their removal, and the subsequent paroxysm made its appearance sooner, and was more severe than the preceding one.

Reflecting on the operation of the ligature in these cases, M. Bourgery has been induced to make trial of it in other diseases, which observe more or less of a periodical recurrence. In a case of chronic pleuripneumony of the left lung, accompanied with violent paroxysms of asthma, threatening asphyxia, for which all the usual remedies had been tried in vain, the preservation of the patient's life was obviously due to the ligatures; after their employment, the paroxysms were either entirely prevented, or much moderated in their violence, and their recurrence much less frequent than before. In three cases of impending apoplexy from cerebral congestion, the ligatures were a powerful auxiliary to the other measures instituted to ward off the attack; and a case of hæmoptysis is related, in which they were productive of the happiest consequences, after venesection had been tried ineffectually. The following are the conclusions which M. Bourgery has drawn from his observations.—1st. Applied at the commencement of the cold stage of intermittents, the ligatures effectually cure that disease. 2d. They are a remedy of great importance, in paroxysms of suffocation, arising from chronic affections of the lungs. 3d. In impending apoplexies they are an useful auxiliary. 4th. They quickly re-establish the circulation in cases of lipothymy, resulting from plethora of the heart. And, 5th. They are employed with great utility in internal hæmorrhages, not occasioned by the rupture of any of the large vessels.

From the Nouvelle Bibliotheque Medicale.

DISEASE OF THE CEREBELLUM.

By M. Guiaud.

A man, aged 52 years, of a sanguine temperament, and much addicted to venereal indulgences, after a paroxysm of anger, experienced an attack of cerebral congestion, from which period his intellect became affected, with some difficulty of articulation; the attack was repeated after an interval of six months, and complete mania was the consequence. The arms and thorax are well developed, and the inferior extremities greatly emaciated; his walk is tottering and laborious, articulation slow, appetite voracious, and there is a considerable development of the genital organs, with frequent erection and emissions. The patient is confined to his bed, but his general heath is tolerably good.

21st August, 1826.—He was again attacked with apoplexy, followed by loss of motion, stertorous respiration, &c. His pulse was small and frequent, and the penis was observed to be in a state of erection. Death took place at five in the afternoon.

Autopsis.—A considerable quantity of serum was found extravasated between the dura mater and tunica arachnoidea, and the latter was thickened over the superior and external portions of the cerebrum; the pia mater was injected, and there was some serous effusion in the lateral and middle ventricles. The cerebellum was evidently more developed than usual, and the superior vermiform process presented a considerable projection; upon making an incision into the latter, a cavity was found capable of containing a two franc piece, and filled with extravasated blood; on removing the coagulum, the parietes of the cavity were seen lined with a soft and yellowish white matter, which was accumulated in greater abundance towards the centre, and gradually disappeared in the surrounding medullary substance—no other lesion was perceptible.

A young man, 19 years of age, addicted to masturbation from his childhood, was brought to the Hôtel Dieu, in a state of extreme exhaustion, occasioned by frequent seminal evacuations, and diarrhœa, which had supervened some time before. He lingered in the hospital two or three months, and died in a state of complete marasmus. On opening the cranium the cerebellum was observed to be larger than ordinary, and on the posterior portion of the left lobe, above the vermiform process, there was a medullary tumour, about the size of a nut, which had already commenced the softening process. These two cases appear to lend some confirmation to the opinions of Dr. Gall, respecting the functions of the cerebellum.

From the London Medical and Physical Journal.

SINGULAR CASE OF MORTIFICATION,

treated by Mr. Green, *at St. Thomas's Hospital.*

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sion by Mr. Kellie of Edinburgh, has been more recently successfully employed in France, and M. Bourgery has just published a memoir on the subject, containing additional evidence of its remedial powers in this and other diseases. From the different mode, however, in which it has been applied in the two countries, one might be led to anticipate no little diversity in its consequences; Mr. Kellie employed the tourniquet in such a manner as to compress two principal arteries, the iliac and subclavian, and thus entirely arrested the circulation through the extremities; in France, on the contrary, a broad ligature is applied round each of the limbs, sufficiently tight to prevent the return of blood by the veins, while the circulation through the arteries is uninterrupted—in the former method, the blood is accumulated in the left cavities of the heart; in the latter, its return to the right side of that organ is prevented. In either case, when the compression is continued a sufficient length of time, syncope is the result—an effect referrible to the different states of plethora and vacuity of the heart; in fact, when the tourniquet is applied to the arteries, there is an augmentation in the strength and hardness of the pulse, suffusion of face, hurried respiration, and impending syncope from the congestion of the thoracic and cerebral vessels; while in compression of the veins, the diminished energy of the circulatory and respiratory systems, quickly followed by a sensation of coldness and debility, and the nausea which precedes the syncope, indicate as the cause of this phenomenon, a diminution in the quantity of the habitual stimulus of the heart.

At the commencement of a paroxysm of intermittent fever, there is an accumulation of blood in the internal organs, and if, as frequently happens, one of these should be suffering under latent inflammation, it becomes more particularly the seat of the congestion, and thus complicates the paroxysm, by the symptoms peculiar to its own condition. Under these circumstances, when the ligatures are applied, a large quantity of blood is immediately withdrawn from the circulation, and an effect produced, similar to that which would result from a copious venesection, but much more considerable, inasmuch as the depletion is more rapidly made, and to a greater extent, than in that operation. After the lapse of about half an hour, the ligatures may be successively removed, at intervals of two or three minutes, in order that the system may not be disturbed by the sudden afflux of a large quantity of blood, and the paroxysm will have been prevented, without having weakened the patient by venesection, or impaired the functions of the stomach, by the administration of remedies more or less stimulating.

It would appear that the employment of ligatures in these cases, is of ancient date in England; M. Bourgery is acquainted with a native of that country, for the last forty years, principal of an extensive manufactory in Normandy, who has been in the habit of curing, in this manner, the disease among his workmen, from observation of its beneficial effects previous to his emigration; and it has long been used as a popular remedy in Wales. In France, MM. Lallemand, Martinet and Rebouam, have published cases equally conclusive in its favour, but M. Bourgery appears to have been the first who has extended its employment to other diseases, in the treatment of which, it has, in his hands, always been productive of considerable advantage, less however, as a principal, than an useful auxiliary.

The proper time for the application of ligatures, in intermittents, is the first approach of the paroxysm, when the patient begins to feel a slight sensation of chilliness; two or three turns of a bandage should be made on the superior part of the limb, sufficiently tight to interrupt the circulation through the superficial veins, and impede, in some measure, the flow of blood through the more deeply seated vessels. The local symptoms are nearly the same in all cases; distention of the subcutaneous veins, tumefaction and discoloration of the extremity, quickly followed by numbness, an unpleasant sensation of prickling, and tremor of the muscles; after some minutes, if ligatures have been applied upon all the limbs at the same time, pandiculations make their appearance, the face is pale, the patient is troubled with nausea, complains of an universal coldness, and unless one or more of the ligatures be loosened, syncope takes place, at the expiration of five or ten minutes. In order to obviate these inconveniences, M. Bourgery has confined the application of the ligature to two of the extremities at the same time, and with equally beneficial consequences. When the numbness, &c. begins to be painful, they are placed upon the two others, and after a short period, those first applied are removed; this method, moreover, possesses advantages, when it becomes necessary to continue the ligatures during a considerable space of time.

The most usual consequence of their first application, is the suppression of the cold stage, and the superinduction of the hot, followed as usual by perspiration; this however does not always occur. After the second application, there is generally no farther return of the fever; in one patient only, out of seven, M. Bourgery was obliged to repeat the ligatures the third time. An evident reaction followed their removal, the pulse became fuller and more frequent, the countenance flushed and animated, and where local pain had previously existed, it either entirely disappeared or was much diminished. These beneficial results are only obtained when the remedy is properly timed; from experiments made by M. Rebouam at the Hôtel Dieu in 1820, he was nduced to conclude--1st. That applied after reaction had taken place, the operation of the ligatures was scarcely perceptible; they diminished slightly the violence of the symptoms, and shortened the duration of the fit, but without evincing any influence over the return of the succeeding paroxysm. 2d. In the inter-

mission, and immediately after the hot stage, their employment was injurious; the syncopes were more frequent, reaction did not follow their removal, and the subsequent paroxysm made its appearance sooner, and was more severe than the preceding one.

Reflecting on the operation of the ligature in these cases, M. Bourgery has been induced to make trial of it in other diseases, which observe more or less of a periodical recurrence. In a case of chronic pleuripneumony of the left lung, accompanied with violent paroxysms of asthma, threatening asphyxia, for which all the usual remedies had been tried in vain, the preservation of the patient's life was obviously due to the ligatures; after their employment, the paroxysms were either entirely prevented, or much moderated in their violence, and their recurrence much less frequent than before. In three cases of impending apoplexy from cerebral congestion, the ligatures were a powerful auxiliary to the other measures instituted to ward off the attack; and a case of hæmoptysis is related, in which they were productive of the happiest consequences, after venesection had been tried ineffectually. The following are the conclusions which M. Bourgery has drawn from his observations.—1st. Applied at the commencement of the cold stage of intermittents, the ligatures effectually cure that disease. 2d. They are a remedy of great importance, in paroxysms of suffocation, arising from chronic affections of the lungs. 3d. In impending apoplexies they are an useful auxiliary. 4th. They quickly re-establish the circulation in cases of lipothymy, resulting from plethora of the heart. And, 5th. They are employed with great utility in internal hæmorrhages, not occasioned by the rupture of any of the large vessels.

From the Nouvelle Bibliotheque Medicale.

DISEASE OF THE CEREBELLUM.

By M. Guiaud.

A man, aged 52 years, of a sanguine temperament, and much addicted to venereal indulgences, after a paroxysm of anger, experienced an attack of cerebral congestion, from which period his intellect became affected, with some difficulty of articulation; the attack was repeated after an interval of six months, and complete mania was the consequence. The arms and thorax are well developed, and the inferior extremities greatly emaciated; his walk is tottering and laborious, articulation slow, appetite voracious, and there is a considerable development of the genital organs, with frequent erection and emissions. The patient is confined to his bed, but his general heath is tolerably good.

21st August, 1826.—He was again attacked with apoplexy, followed by loss of motion, stertorous respiration, &c. His pulse was small and frequent, and the penis was observed to be in a state of erection. Death took place at five in the afternoon.

Autopsis.—A considerable quantity of serum was found extravasated between the dura mater and tunica arachnoidea, and the latter was thickened over the superior and external portions of the cerebrum; the pia mater was injected, and there was some serous effusion in the lateral and middle ventricles. The cerebellum was evidently more developed than usual, and the superior vermiform process presented a considerable projection; upon making an incision into the latter, a cavity was found capable of containing a two franc piece, and filled with extravasated blood; on removing the coagulum, the parietes of the cavity were seen lined with a soft and yellowish white matter, which was accumulated in greater abundance towards the centre, and gradually disappeared in the surrounding medullary substance—no other lesion was perceptible.

A young man, 19 years of age, addicted to masturbation from his childhood, was brought to the Hôtel Dieu, in a state of extreme exhaustion, occasioned by frequent seminal evacuations, and diarrhœa, which had supervened some time before. He lingered in the hospital two or three months, and died in a state of complete marasmus. On opening the cranium the cerebellum was observed to be larger than ordinary, and on the posterior portion of the left lobe, above the vermiform process, there was a medullary tumour, about the size of a nut, which had already commenced the softening process. These two cases appear to lend some confirmation to the opinions of Dr. Gall, respecting the functions of the cerebellum.

From the London Medical and Physical Journal.

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The sore on the face is of a triangular shape, extending from the bridge of the nose to the upper lip, making the nose level with the cheeks, and exposing the alveolar processes of the upper jaw: there is a dark brown and dry slough upon the surface, with an evident line of separation, which is furrowed

round the sore, showing the ivory appearance of the bone beneath in some places, and just detaching the slough from the edges in the others; there is no blush of inflammation or tenderness. The left foot has a slough upon the toes, similar to the former, though irregularly affecting them, while a livid hue extends up to the ankle. In the right foot, discolouration alone is present. The hands partake also of the same appearance. Each limb is cold to the touch, and produces to the patient the sensation of burning heat. The temperature of the whole body is far below the natural standard; the pulse is 100, and very feeble; tongue dry and brown; great thirst; skin hot; his stools are frequent, and passed almost involuntarily; and his urine is scanty. Mist. creta f℥j.; conf. arom. ℈j.; tinct. opii m. xx. quartâ quâque horâ.—Aquæ vitæ et aquæ tepid. āā ℥ss. omni semihora.—Cat. lini to the sloughs. Flannel to the discoloured parts.

Nine P. M.—Skin burning hot and dry; pulse sharp and quick; thirst still great. Brandy every hour only, with double quantity of water.

Eleven P. M.—General excitement the same; the skin hotter. Brandy every hour and a half, with hot water every half hour.

13th, seven A. M.—Skin getting cold again, and pulse sunk, but no perspiration. Brandy every hour.

Twelve o'clock.—Much the same. ℞. Mist. cretæ f℥ss.; conf. arom. ℈j.; tinct. opii m. xx. quartâ quâque horâ.—Beef tea.

14th.—Very little alteration. Diarrhœa less; spirits better, and answers more freely, but there is always a dulness about him. ℞. sulph. quinin. gr. v.; tinct. opii m. x.; inf. catechu ℥iss. quartâ quâque horâ.

Half-past ten P. M.—Delirious, with great restlessness, and tossing about for the last hour, having complained of considerable pain in the affected limbs. Pil. opii gr. iij. st. s. et repr. j. omni semihorâ.

The delirium continued to increase till half past twelve, when he suddenly expired.

18th.—On examination nothing unusual presented itself. The liver and kidneys were much enlarged, but their structure, as well as that of every other viscus, was perfectly healthy. The lungs, heart, and large vessels, showed nothing unnatural. A little water was found at the base of the brain.

In this case, the most remarkable circumstance is the obscurity of the cause, in the search of which, neither the history from the patient while living, nor the post-mortem examination, could assist us. Nourishment had been supplied to him in sufficiency, and he could not have been exposed to any great degree of cold. The large arteries indicated no diseased alteration; and we were not induced to examine the smaller vessels, as the same appearances would, in all probability, have been seen as in the large ones.

While in the hospital, his different limbs exhibited all the various stages of the disease very remarkably at once. His hands were slightly discoloured, numbed, and cold to the touch; the right foot was of a deeper cast; and the left exhibited a slough, not circumscribed, but inclined to spread, the black and livid colours being intimately blended together; while on the nose was not only a line of demarkation, but in some parts actual separation.

From the Medico-Chirurgical Review.

EXTIRPATION OF THE UTERUS.*

By Dr. Gustavus Hesse.

This operation, though one of the most formidable in surgery, has been practised for centuries past—and more frequently by ignorant or audacious charlatans, than by regular surgeons. A German surgeon, however, (M. Osiander) rescued this operation from the hands of quacks, but, unhappily, he never could be prevailed on to give the details of his practice to the world at large. He simply stated, from time to time, that he had performed the operation, and promised a book on the subject; but he died at an advanced age, and has left no records of his cases—at least, that are available by the profession.

Osiander's operation was seldom imitated till of late years, when several cases have been published of partial and even of total ablation of the womb. It would be wrong to form too sanguine hopes from this operation, especially in cases of cancer uteri; but the experience of Osiander enabled him to aver, that extirpation of scirrhous uterus was as successful as extirpation of that disease in other parts of the body. All of his patients recovered from the immediate effects of the operation, though some of them relapsed afterwards, and died of the renewed malady.

This operation (extirpation of the uterus) is said to have been performed in a great many instances formerly. Baukin relates nineteen cases; and Schenk a far greater number. But it is justly doubted, whether many of these were not partial amputations of the organ, or removals of polypi, which had been mistaken for enlargements of the womb. Baudelocque, however, considers it as incontestible, that the extirpation of the uterus had been successfully executed before his time. The operation has been performed too, when it was not designed—and the uterus has been mistaken for a polypus or other morbid growth, and extracted under this false supposition. In our own country, Clarke and Johnson have afforded examples of this nature; while Petit, Paletta, and others, have recorded instances on the Continent. From this it will be evident, that it is not very easy to get at the exact truth, in the relation of cases, even where there is not the smallest disposition to deceive, on the part of the operator.

Our author investigates the history and utility of this operation under three points of view—in prolapsus uteri—inversio uteri—and cancer of the organ.

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* Allgemane Medezin. Annalen. May, 1826.

1. *Prolapsus Uteri.* This appears to have been the case to which the operation in question was first directed, if we fairly interpret the writings of Ætius and Paulus Egineta. No doubt this measure was not resorted to, except in extreme cases—probably where the uterus was threatened with gangrene. In the case related by Hosack, (Med. and Philos. Register,) the womb, at first prolapsed, had afterwards become inverted, and had degenerated into a scirrhous structure. The uterus extirpated by Ruysch, was in a similar condition; and that operated on by Wolff, was prolapsed and carcinomatous. Fodéré (Journ. Complement. tom. xxi.) details a case of prolapsed uterus, where the organ was first tied with a ligature, and, two hours afterwards, cut away. The organ was changed in structure.

The ligature first, and resection afterwards, was the most general measure which was resorted to both by Ancients and Moderns, but not the only means. Ambrose Paré relates a case where the knife was used without any ligature, and the woman recovered from the operation, but died three months afterwards of pleurisy. Another case is on record, where a bold and ignorant empiric cut away a prolapsed and inverted uterus, and, with it, several feet of intestine which had descended in the organ! Van Heer witnessed this exploit. We need hardly say that almost immediate death was the result. Langenbeck extirpated, with the knife alone, a carcinomatous prolapsed womb. After having divided, by a scalpel, the connexions of the vagina with the uterus, and dissected the peritoneum back off the organ, he removed the uterus, but encountered a tremendous hæmorrhage, from which, however, the patient recovered completely.

The ligature alone, without the knife, appears to have been seldom trusted to in this operation. Blasius mentions a case where a woman died three days after the application of a ligature. Dr. Marschall, of Strasburg, (in 1794) applied a ligature to a prolapsed and scirrhous uterus, but was obliged to cut it away on the second day, in consequence of pains in the abdomen and convulsions. He then had recourse to the knife, and the woman survived the operation ten years. Ruysch has published an unfortunate case where the ligature included the urethra of the patient, and death ensued.

2. *Inversion of the Uterus.* This state of the organ gave occasion to the operation in question, full as often as prolapsus uteri. There must always, indeed, have been more or less of prolapsus accompanying inversion of the organ—and the Ancients did not make any very nice distinction between these two states. The inverted uterus has been, sometimes, cut away at once—sometimes tied with ligature, and then amputated—sometimes treated with the ligature alone. It has been totally, and it has been partially removed. Wrisberg relates a case where a midwife inverted the uterus, and then cut it away, thinking it was the afterbirth! The woman survived after a frightful hæmorrhage. This is encouragement for Sir Anthony and his ultra-delicate partisans. M. A. Ulmus gives the history of a similar exploit performed by a midwife; but the result was immediately fatal. A third instance, in all respects the same, and with a similar catastrophe, is put on record by Fabricius Hildanus. In the *Annal. de Literat. Med. Etrang. à Gand.* t. xv. there is a case where a midwife, in dragging at the umbilical cord, inverted the uterus. The sage femme completed the job by cutting all away with a razor. The patient fortunately recovered by the application of ice, which stopped the hæmorrhage. These cases induce to the belief that, in the hands of a skilful surgeon, the danger of the operation is not so great as one would be led to suppose. Among the numerous cases on record, where the inverted uterus was extirpated, we shall only cite a few.

Vieussens and other surgeons were consulted in the case of a woman, where a tumour presented, the exact nature of which they could not ascertain. They all agreed that it should be removed, which was done, by ligature and the knife. It was then discovered that they had extirpated the uterus. The woman recovered perfectly, and lived fifteen years afterwards. The body was examined in the presence of several physicians and surgeons—and the fact was proved beyond a doubt. Mr. Baxter relates a case where the uterus was inverted, and, five weeks afterwards, the ligature was applied and the organ cut away. The woman recovered. A case is related in the Medico-Chirurgical Transactions by Sir Astley Cooper, in which Mr. Windsor tied and extirpated an inverted uterus with success.*

The ligature *alone* has been used in but a few cases comparatively. Mr. Newnham's case is well known, and is fully detailed by him in an essay on the subject. M. Faivre (*Journ. de Medecine, Aout*, 1786) performed this operation by the ligature. The uterus had been inverted by the violence of the midwife, and was sphacelating. He applied the ligature. The patient was harassed with vomiting, convulsions, and diarrhœa, till the 27th day, when the parts separated, and the patient, from that time, did well. Under the same head, may be ranged a case in the third volume of the Dublin Hospital Reports, communicated by Dr. Charles Johnson. An inverted uterus was mistaken for a polypus, and a ligature applied. The mistake was discovered, but it was deemed prudent to continue the ligature. In three weeks the tumour came away, and the patient did well. It appears that Dr. Johnson was in error, in his remarks on this case, by attributing to M. Petit the honour of having first applied the ligature for the removal of inverted uterus. German research has proved that this opera-

* Vol x. p. 365.

tion was performed by Rousset and many others, long before M. Petit existed.

3. *Extirpation of Carcinomatous Uterus.*—We are now arrived at the period when the operation of extirpating, partially or totally, the uterus or its neck, affected with scirrhus or cancer, (but neither prolapsed nor inverted,) has created a great sensation in the medical world. In this historical sketch, however, we must sometimes revert to cases where the above mentioned conditions (prolapsus and inversion) accompanied the carcinomatous state.

The merit of first operating on the uterus in this dreadful disease, is generally given to Osiander, though it is certain that Wrisberg *proposed* the operation long previously. But, as there is one glory of the sun, and another of the stars—so there is one kind of honour in *proposing*, and another in *executing* a hazardous and new operation. It is certainly very probable that, among the numerous instances of extirpation of the uterus, for inversion and prolapsus, there were some cases of scirrhus or cancer; but still Osiander has the merit of first amputating the uterus in a carcinomatous state, uncomplicated with inversion or prolapsus.

Osiander was greatly averse to total ablation of the organ. He dreaded the descent of the intestines, the hemorrhage, &c. He therefore contented himself with the removal of the diseased portion of the womb, by means of scalpel or scissors. At first, he recommended and practised the drawing down of the uterus by means of a ligature, before cutting away the parts; but he afterwards abandoned this measure, and trusted to the fingers introduced into the cavity of the womb, and serving as a guide to the cutting instruments.

Osiander performed this operation 23 times in fifteen years, viz. between 1801 and 1816, yet he never published a single case in detail; but only gave a few particulars of the first operation to the public. Our knowledge of the facts of these operations is authenticated by those who witnessed them; but the original operator carried with him to his grave all the knowledge he possessed on the subject. This is a great sin in any man. Medical knowledge is derived from the public, as rain is derived from the ocean. The former should return to its *source* like the latter.

Professor Rust (*Med. Chir. Zeit.* 1813,) was the first in Germany to imitate Osiander. He extirpated the cervix uteri, according to the plan of Osiander, in the case of a woman, 50 years of age, who had a cancerous excrescence of this part, the size of a man's fist, the rest of the organ appearing to be sound. The hemorrhage was very considerable, and was with great difficulty restrained. The patient died eight days after the operation, and, on dissection, the remainder of the uterus was found in a state of sphacelus.

Paletta (*Med. Chir. Zeit.*) performed the operation of Osiander, as he thought; but, on examination, the *whole* of the womb was found to have been removed, in a prolapsed and degenerated state. The woman died three days after the operation, with symptoms of peritonitis.

Graefe was the next who performed ablation of the cervix uteri, affected with a cancerous disease. He removed the parts with scissors. The hemorrhage was arrested by the introduction of sponges soaked in cold water. Inflammation of the remaining portion of womb, of the bladder, and of the intestine, supervened, and reduced the patient to a state of great danger, but she ultimately recovered.

In France, the operation has been several times performed by Dupuytren. Previous to 1815, (*Bibliotheq. Med. Fevrier*, 1815,) this eminent surgeon had operated seven times. In one case, the disease returned at the end of two years—in a second, there was a recurrence of the malady in 18 months. In a third case, the woman was living and well in 1815, four years after the operation.

Bayle strongly recommended, and indeed brought into vogue in France, the treatment of cancerous uterus by means of caustic. That distinguished physician had observed, in numerous dissections, that the change of structure under uterine ulcerations, goes to a very limited depth—only two or three lines. The arsenical paste, and even the actual cautery, have therefore been frequently applied with success in France.

Numerous objections have been made by Wenzel, Zang, Siebold, and others, against Osiander's operation of *partial* ablation of the uterus. The main objection consists in the fact that, in such cses, there is *generally* disease, or strong disposition to disease, in the whole of the organ, and consequently, there is great chance of the disease continuing or returning. It must be confessed that this objection very often lies; but the same may be urged against the operation in any or every other part of the body. There may be cases and circumstances to which this partial amputation of the uterus is applicable.

As to the question respecting the best method of operating, it is doubtful whether the ligature, the knife, or both in sequence, should have the preference. The knife would certainly be the best instrument, could we be sure of commanding the subsequent hemorrhage.

Total Ablation of the Womb.—Before this operation was attempted, Wenzel, Zang, and others, pronounced it to be impracticable—or, if practicable, that it would be inevitably fatal. Experience has shown how dangerous it is to prognosticate with confidence on the event of any surgical operation. Sauter was the first to disregard these croaking predictions, and try the experiment. The patient on whom he first operated was 50 years of age, and affected with a true cancer of the whole uterus. The operator first tried to draw down the organ with his finger; but finding that impossible, he passed the fore and middle fingers of the left hand between the pubes and the uterus, and with these as a

guide, he separated the connexions between the vagina and uterus, anterior and lateral. This done, he was enabled to draw down the uterus by means of a hook. A further separation of the organ from its neighbouring parts was effected, but not without wounding the bladder. It was now found impossible to remove the uterus without cutting through the peritoneum. This was done, and the cavity of the abdomen was actually laid open. The fingers were then passed up over the fundus uteri, and the attempt made to invert the organ forwards; in which attempt a quantity of intestine was protruded. This was returned —the antero-version of the uterus effected; and the organ finally cut away. Means were then used to prevent the prolapsus of the intestines, and, in two months, the wound might be considered as healed, with the exception of a vesicle fistula. Four months afterwards, however, the patient fell a victim to a disease of the lungs. On dissection, there were found only some trifling adhesions between the ileum and the peritoneum, the result of the operation; the cause of death being in the lungs.—*Sauter's Work.*

First operation of Siebold. This case is detailed in the third volume of the present series, p. 264—6. It was fatal; but the mass of disease in the abdomen rendered it hopeless from the beginning—and, indeed, an improper case for the operation at all.

Operation of Hoelscher. This case is also given in the same volume, immediately after the preceding one. It was fatal.

Operation of Professor Langenbeck. Two females were operated on by this gentleman.

Case. A woman, 30 years of age, was received into the clinical wards of Langenbeck, in Gottingen, on the 4th of January, 1825. She had had eleven children, and enjoyed good health till within three or four months of the date above mentioned. When examined in the hospital, she presented the following symptoms: viz. abdomen painful, especially on the right side; a great deal of fetid discharge from the vagina; two scirrhous tumours in the vagina, preventing easy access to the uterus; neck of the womb ulcerated; internal parietes of the organ, as far as could be felt, studded with tumours; in short, the uterus was pronounced to be, not merely scirrhous, but affected with open cancer. On the eleventh of January, Langenbeck performed the operation, above the pubes. An incision being made from the sympysis pubis to within two inches of the umbilicus, the parietes of the abdomen were cut through to that extent. The intestines and bladder being kept out of the way by assistants, the operator seized the uterus with his left hand, and, introducing a long pair of scissors, shut, into the abdomen, he first separated the right ovary from the uterus, and then went on detaching the organ itself, together with the scirrhous tumour above mentioned, till the whole were removed, the operation not lasting more than seven minutes. There was very little hemorrhage, and no protrusion of the intestines through the vagina. The patient died 32 hours after the operation. On dissection there were seen marks of extensive peritoneal inflammation, and a large quantity of coagulated blood in the pelvis. The bladder was gangrenous.

Second operation of Siebold. A female, 30 years of age, of delicate constitution, (whose mother had died of cancer of the womb, at the age of 45,) had always enjoyed good health, and had borne some children. After her fifth accouchement, she entered the hospital of Berlin, in 1824, complaining of violent pains in the region of the uterus, of a darting and burning nature, extending often to the abdomen, and causing faintness. There was also a sense of weight in the hypogastrium, with frequent and painful micturition, bad state of the bowels, nocturnal sweats, shiverings and flushings alternately. There was a discharge from the vagina, sometimes inodorous, sometimes fetid, sometimes mixed with clots of blood. The projecting portion of the os tincæ was hard and very painful to the touch. The fundus uteri was also very painful, and turned a little backwards. There were various hemorrhoidal excrescences about the anus. The conclusion was, that the uterus generally was affected with scirrhus. The patient ardently wished for an operation, and it was performed on the 25th July, 1825. The vagina was slit on one side, and the uterus being hooked with a needle and strong ligature, was removed by means of long scissors. The operation lasted 25 minutes, the patient supporting it with the most heroic fortitude. The hemorrhage, at first, amounted only to a few ounces; but, twelve hours after the operation, there issued from the vagina ten or twelve ounces of pure blood. The patient sank the next day. Extensive inflammation was found in the abdomen.

Second operation of Langenbeck. A female servant, 28 years of age, was received into the clinical wards of Gottingen Hospital, on the 28th July, 1825. She had borne her first child at the age of 19, and a second at the age of 24 years. This last accouchement was very laborious, and instrumental aid was necessary; but she recovered well, and continued so till 1824, when she began to experience lancinating pains in the pelvis, from time to time, especially in the left side. On examination, the abdomen was found painful on pressure; the os tincæ was projecting and hard to the touch; the uterus itself appeared sound on the right side, but in the left it presented scirrhous eminences, and was adherent to the vagina. From this part there was a thin sanious discharge. The finger introduced into the rectum, felt the uterus hard and studded with scirrhous tubercles. The disease was therefore pronounced to be scirrhus uteri.

The operation was performed on the 5th August, at 8 o'clock in the morning, after proper preparation of the patient. The bladder being emptied, the perineum was incised backwards by a bistoury, in order to give more space to the operator. The surgeon

took the hysterotome of Osiander, and commenced his incision in the right side of the vagina—then introducing the fingers of the left hand along the posterior parietes of the vagina, between the rectum and the uterus, he divided the peritoneum with the hysterotome, and enlarged the wound towards the bladder, by means of the scissors. He then seized the fundus uteri with his fingers, (keeping the back of his hand towards the abdomen to prevent the decent of the intestines,) and drew it downwards, dividing the connexions, and removing the organ. The operation lasted 15 minutes. A sponge dipped in vinegar and water was introduced into the wound, and the patient put to bed. She died on the 7th, after midnight. The peritoneum was every where found coated with coagulable lymyh, agglutinating the intestines together. The bladder was black—much blood in the pelvis.

Upwards of two years ago, (July 1825,) when we stated the case of Professor Siebold, we took the liberty of differing from our senior cotemporary of the north, on this point of surgery, and made the following remark. "We consider the extirpation of a uterus not previously protruded or inverted, one of the most cruel and unfeasible operations that ever was projected or executed by the head or hand of man." We still think so; and we believe we are borne out in this opinion by the results. Let us hear what Dr. Hesse says on this occasion. We shall quote from the French. "Dironsnous avec M. Siebold:—*felix quem faciunt aliena pericula cautum!* Les resultats de ces essais ont étè en effet tellement fâcheux, que tout operateur trop entreprenant, devrait, ce semble, s'arreter, au souvenir de ces monumens effrayans d'un zèle poussé à l'exces."

At the same time Dr. Hesse thinks that the result of Sauter's operation prevents the door from being completely shut against total ablation of the uterus, where there is neither procidence nor prolapse of the organ. All we can say is, that we conceive the *total* extirpation of the womb, and consequently the opening into the cavity of the abdomen at the part, is an operation not justified by any thing yet put upon record. The partial extirpation of the organ is quite another thing, because it does not expose the peritoneum to incision.

From the Lancet.

INTERESTING CASE OF SPINA BIFIDA, *treated according to the plan of Sir A. Cooper, by Puncture.*

A strong child, ten days old, was brought to the Hospital, some time ago, with a large swelling, measuring nearly 14 inches in circumference, situated in the central portion of the sacrum; which was tense, elastic, and semi-transparent, and evidently contained a large quantity of fluid. The integuments forming the parietes of this swelling were remarkably thin, and, at some places, of a deep red colour, and appeared as if about to ulcerate. The central portion of the sacrum was evidently deficient, and the tumour could be traced to extend nearly to the situation of the cauda equina.

From this disease, which was congenital, although at first scarcely of one-third the size which it had since attained, the child seemed to suffer little inconvenience, and although the tumour was of large size, and must have compressed the termination of the spinal marrow, nothing like paralysis of the lower extremities had ever been produced, nor yet had it on any occasion, given rise to convulsions, which are so frequently the result of this disease. As the integuments of the swelling were inflamed, and as there appeared to be a great likelihood of their ulcerating, and of the contents being consequently discharged by a large opening, which would have probably been speedily followed by death, Mr. Wardrop deemed it advisable to puncture the sac with a small needle, in order to allow of the gradual discharge of the fluid. This operation, which was repeated five times during the succeeding ten days, was attended with no symptoms of the least consequence, except, perhaps, a slight degree of febrile excitement, which soon disappeared. On the 11th day, as the fluid was found to be rapidly accumulating, and as no bad consequences had resulted from the previous operations, it was thought proper to introduce a very small trucar, when nearly five ounces of a very dark-coloured and thick fluid were evacuated. It was now found that the parietes of the tumour had undergone a very considerable change, and that they had become very much thickened and corrugated. On the 14th day, the appearances of the tumour were very much improved, its size was evidently much less, and its parietes were gradually becoming of greater thickness. The fluid, which was of a very fetid nature, and intermixed with numerous small flocculi of lymph, was again evacuated. The health of the child continued unimpaired.

During the succeding month, the swelling was occasionally, by means of the small trocar, punctured, and its contents, which had now degenerated into a thin serous fluid, drawn off. At the termination of this period, the tumour was reduced to less than one-third of its original size, and what remained attained a very solid consistence. The child seemed to be, otherwise, in perfect health, and had none of those symptoms which usually mark the progress of the disease. A few days, however, subsequently to this period, the little patient was suddenly, and apparently without any cause, seized with convulsions, which speedily terminated his existence.

On dissection, the integuments of the tumour, which was divided into three cavities, were found to have become remarkably thickened and indurated, and, indeed, entirely to have lost the appearance of the cutaneous textures. The cavities were in immediate connexion with the termination of the spinal marrow, but, from the alterations in structure,

it was impossible to discover whether or not the meninges of the cord constituted a covering to the tumour. The spinal marrow itself seemed to be sound, and no other disease existed in the body.

The history of this case, the great benefit of the treatment employed in arresting the fatal termination of the disease, and in producing nearly an obliteration of the cavity of the tumour, argue strongly in favour of the treatment by puncture, employed and recommended by Sir Astley Cooper, even although it ultimately proved unavailing.

From the Journal des Progres des Sciences et Institutions Medicales.

MENTAL ALIENATION.

Summary of the observations made in the Royal Hospital of Aversa, from the first of January, 1814, to the 31st of December, 1823, by Dr. Giuseppe Lostritto, physician to that establishment.

Admissions.—In the space of the ten years, included between these periods, 1725 patients were received, averaging 175½ for each year. The greatest number were admitted in the years 1822 and 1823, when the political disturbances were at their height, and many more during the months of May, June, July and August, than during the three winter months. The same thing obtains in Paris and London. In Naples, as well as in the rest of Italy, Spain, and the north of Europe, the number of admissions is in general less than in France and England.

Age.—The greater part of those admitted were between the ages of 20 and 30 years; at the latter period especially, they were most numerous, and this remark is equally applicable to both sexes. After the age of 40, the disease was much less frequent.

Sex.—In Naples, and the observation extends also to the rest of Italy and to Spain, the males are more subject to this disease than the females. In the southern part of France, the proportion is nearly equal, while in the north, the number is greater among the females. At Moscow and St. Petersburg the relative frequency of the disease among females and males is as 4 to 5.

Temperament.—At Naples, the bilious temperament is more especially exposed to the disease.

Condition.—Peasantry formed a fourth part of all those admitted, and from a consideration of the causes producing the disease amongst them, it appeared to be owing less frequently to insolation than to the wretchedness of that class of people in Naples. The proportion of the married and unmarried was pretty nearly equal; in France it is most frequently met with among the latter.

Causes.—Moral causes in Naples, France and England, are much more frequently operative than physical ones. According to the registers, there were only twenty instances of hereditary insanity. This number is so disproportioned to that observed in other countries, that there would seem to be some error of observation on the part of the physicians whose duty it is to investigate the causes of the disease; should it be otherwise, it would be highly important to ascertain the cause of so great a difference. In Naples insanity is frequently the consequence of fevers, cerebral affections, and particularly malignant intermittents; the tender passions appeared to be the exciting cause in about one-tenth of the inmates of Aversa; but in the kingdom of Naples, as in that of France, vanity, pride and ambition, are the tyrants which are most frequently subversive of the human intellect.

Species.—Monomania is more frequent than all the other species of insanity. Of 1430, 783 were monomaniacs; and of these 365 had the disease in its cheerful form, while the remainder were a prey to the depressing passions. It began in June, continued through July and August, and became more frequent in September and October. The cases of mania often made their appearance somewhat earlier, and were particularly frequent in July and August.

Cure.—Patients labouring under *mania* more generally recovered than those attacked with the other forms of insanity, the proportion for males was as 3 to 10, and for females 5 to 17, a less encouraging result than is furnished by France and England. The successful cases increased in frequency in September, remained stationary in October and November, and became particularly numerous in the month of April. These results coincide with those obtained in France. In 1819 and 1820, a greater number of cures were obtained at Aversa than in any of the preceding or following years; in France the successful cases were more numerous in 1814, '15 and '16, a circumstance explained by the political occurrences of the times.

Relapses.—In the period of ten years, now under consideration, of 575 cured (405 males and 170 females,) 108 had a return of the disease, of which number 52 were males and 56 females. In France relapses are less frequent, being in the proportion of one in nine for the males, and one in ten for the females.

Mortality.—At Aversa, the mortality is nearly equal for both sexes, and amounts to rather more than one-fourth of the whole number. In France it is one-ninth for males, one-sixteenth for females, and one-thirteenth for both sexes. At Aversa, as in the kingdom last mentioned, the winter months furnish the greatest number of fatal cases; 278 died in November, December and January, and 529 in the other nine months. The mortality was less in May, June and July, than at any other period; 116 died in 1816, by reason of a typhus epidemic which prevailed in the hospital that year; the average number of fatal cases has been 33 yearly. Insanity is not of itself a fatal disease; very few died apoplectic. The dry gangrene, exanthematous fevers, cachexies, suicides, &c. were the most frequent causes of death.

From the Journal Universel des Sciences Medicales.

EXTENSIVE DEGENERESCENCE OF THE LYMPHATIC SYSTEM. By Dr. Pallas, Adjunct Physician of the Military Hospital of Pampeluna.

The subject of the case, Martine Vavasain, aged 51 years, was a woman of an irritable temperament, reserved and pusillanimous disposition, and habitually moderate in her diet. She married at the age of 35, but had no children. Till within the last four months she had continued to enjoy excellent health, interrupted only by a slight attack of intermittent fever in her childhood, which disappeared without the aid of medicine. At the period mentioned, taking part with her husband in a dispute with one of his neighbours, her passion became much excited, and she was attacked with severe pain in the stomach, attended with nausea and retching. From this time her health became impaired, her appetite entirely disappeared, and *engorgement* of the legs was soon after perceptible; that of the right side was affected with erysipelatous inflammation. Some days later, numerous little tumours, about the size of a hazel nut, made their appearance beneath the skin of this part, and subsequently upon the thighs. At the expiration of a month and a half, they were found scattered almost over the whole surface of the body, attended with considerable tumefaction of the right side of the neck. The tumours increased in size, and became painful; but this state was of short duration; they soon resumed their indolent character, and there was an evident diminution in size. December 22d, 1826, she was admitted into the civil hospital of Pampeluna. On her entrance she appeared melancholy and dejected, appetite entirely gone, and tumours of various magnitudes were observed covering the lateral parts of the trunk, the whole surface of the abdomen, and the extremity and base of the tongue. Supposing the disease to be a case of melanosis, the attending physician was about to try the effects of iodine, when the patient unexpectedly sunk, became cold, and died on the 14th January, 1827, in full possession of her intellectual faculties.

Dissection.—External habitude.—The body was of small stature, and much emaciated; the skin pliable and free from eruption, was embossed by tumours of various sizes, which were more immediately invested by a smooth, fibrous envelope, of considerable firmness. In examining the body from below upwards, they were visible—1st, on the legs and interior of the thighs, where they were as large as a filbert; 2d, of the size of a horse chesnut, covering the whole surface of the abdomen, but especially congregated in the neighbourhood of the epigastrium; 3d, upon the lateral parts of the chest and neck, extending to the mastoid processes; 4th, on the forearm and arm, particularly on their internal surface, extending to the axillary glands, which were considerably enlarged. The inguinal, parotid, submaxillary and mammary glands were in their natural condition. Extending the dissection to the muscular system of the trunk and extremities, tumours of the kind already mentioned were found scattered in considerable number between the superficial and deep seated layers on the forearm, several were seen between the muscles of the arm, five between the recti abdominales, three between the intercostals of the right side of the thorax, and one equalling in volume a large egg, beneath the left sterno-cleido mastoideus; nothing similar was observed between the muscles of the inferior extremities and posterior part of the trunk.

Digestive Apparatus.—Tumours of the same character, the largest of which did not exceed the size of a pea, were found upon the extremity, and particularly at the base of the tongue, situated immediately beneath the mucous membrane.

On opening the abdomen, a considerable quantity of bloody serum was found in its cavity; the omenta were injected, blackish, and presented a macerated appearance; five tumours, the smallest of which was about the size of a large chesnut, were found between the lamina of the omentum gastro-colicum, in the portion which intervenes between the stomach and transverse colon; they were also scattered in considerable number throughout the whole extent of the mesentery, presenting on each side of the vertebral column masses of great magnitude; several were found on the lateral parts of the vertebræ, covered by the peritoneum; but the most remarkable was a tumour of an ovoid form, equalling in volume a small melon, situated between the spleen and left kidney, to both of which it was connected by cellular tissue. This enormous mass was enveloped like the others in a kind of fibrous membrane, and weighed one pound five ounces. Several of these tubercles, in consistence and colour not unlike a coagulum of blood, were found with their covering ruptured, and their contents escaping into the cavity of the abdomen, communicating a bloody tint to the extravasated fluid. The stomach, distended with gas, contained a small quantity of mucus; its villous coat was of a pale colour throughout, and presented a macerated appearance in several places. It was readily detached from its connexion with the other tissues. The intestines, and especially the duodenum, were red and inflamed; they were distended with gas, and contained a small quantity of fecal matter. The liver was of considerable magnitude, but presented no unusual appearance; the substance of the spleen was more fragile than ordinary, and resembled that of the lymphatic tumours. The remaining viscera presented nothing remarkable, with the exception of the uterus, which was very small, and contained a minute quantity of bloody serum.

Respiratory Apparatus.—The right side of the thorax contained a small quantity of yellowish serum, and three tumours, about the size of a filbert, were found on the right side of the vertebral column; the left side present-

ed no unusual appearance. The lungs distended with air, were sound, crepitating, and free from tubercles. The bronchial glands, which are generally found without difficulty, were almost invisible in this instance.

Circulatory Apparatus.—A minute quantity of limpid serum was effused into the cavity of the pericardium. The heart was of the usual size, pale, and softened in its texture; two tumours of the size just mentioned were situated on a level with the partition of the ventricles, towards the base of the organ; and two others internally, one upon the columnæ carneæ, and the other on the internal parietes of the left ventricle. The vessels were nearly empty, and the blood had evidently undergone a considerable change, it was less deeply coloured, and contained a smaller proportion of fibrine than is usually met with.

Internal Sensitive Apparatus.—The cavity of the cranium presented nothing remarkable; the substance of the brain preserved its ordinary consistence, it was of a pale colour, and its vessels almost entirely empty; the ventricles contained a considerable quantity of yellowish serum. The vertebral column was not opened.

Physical Character and Chemical Composition of the enlarged Glands.—Their figure was variable, oblong, reniform, but more frequently oval; their specific gravity considerable, and they were invariably situated upon the course of the lymphatic vessels. They were furnished with a fibrous envelope, smooth, resisting, and about two lines in thickness, containing a dark red matter of the consistence of inspissated honey, and enclosed in meshes formed by the delicate cellular tissue, which traversed their interior. Placed between the fingers, this matter was easily broken down, and appeared to be formed by an assemblage of minute globules, furnishing upon chemical analysis, water, a brown pulverulent substance, insoluble in water at all temperatures; albumen; a very minute quantity of colouring matter resembling that of the blood; mucus and hydrochlorate of lime.

The preceding case is considered by Dr. Pallas as demonstrative of the correctness of the opinion advanced by M. Broussais, which attributes the formation of tubercles in the mesentery to gastro-enteritic inflammation.

From the Medico-Chirurgical Review.

SECTION OF THE PNEUMO-GASTRIC NERVES.

[M. Dupuy. Veterinary School of Alfort.]

It is now ascertained, beyond all doubt, that section of the par vagum, on both sides, destroys an animal, say the horse, in a few hours, by paralyzing the muscles about the larynx, and thus causing asphyxia. When death is thus produced, we cannot properly ascertain the real effects of the interruption of the nervous influence on the stomach, lungs and other organs. M. Dupuy, therefore, in his experiments, opens the trachea of the horse, by which the animal is made to live from fifty to sixty hours. The gentleman in question has laid some experiments lately before the Medical Society of Paris, in which the effects of the pneumo-gastric section are shown. Thus, the nerves were divided in both sides of a horse's neck, and portions cut away. Tracheotomy was then immediately performed. The animal was carefully examined at certain periods, and also bled before and after the operation, in order to ascertain the effects of the section on the blood, as well as on various functions. Two hours after the section, there was no alteration in the functions of respiration, circulation, &c. The animal continued to eat as before. In four hours, the breathing was accelerated—the blood from the carotid was now darker in colour than before—the animal ate and drank, but deglutition seemed performed by a convulsive action, and liquids returned by the wound in the trachea. At the end of 16 hours, the breathing was slow and deep—much mucus flowed from the wound in the trachea, and the food returned by the same aperture—the action of the heart is much weakened—arterial blood is now nearly as dark as venous. The fourth examination, at the end of 28 hours, showed no material alteration. At 40 hours from the operation, the animal had great difficulty in swallowing—the blood from an artery was quite black—the œsophagus was felt to be crammed with food—and the horse was comatose. At 52 hours, the breathing was stertorous, and he soon died.

Dissection.—There was nothing wrong in the brain. All the parts forming the aperture in the larynx were swelled and red, so that the passage was almost entirely closed. The mucous membrane of the larynx and trachea was red, and otherwise discoloured, but these were considered cadaveric phenomena. The lungs were inflamed and hepatized—the bronchia were filled with mucosities. The substance of the heart was much softened, and its cavities filled with black blood. The œsophagus was filled with alimentary matters, as were the pharynx and nasal cavities. The stomach was filled and distended with food almost dry, and adherent to the mucous membrane of the organ, which was of a red colour. There was no chyme in any of the intestines. The liver was enlarged—and there were several large black spots on the spleen.

From the above, and other experiments of a similar kind, it is evident that section of the pneumo-gastric nerves stops the sanguifactive (arterializing) process in the lungs—paralyzes the œsophagus—and puts an end to the secretion of gastric juice, and, consequently, digestion in the stomach.

The experimenter found, in this, and several other cases, that a peculiar effect is produced on the spleen by these operations—namely, that its blood is changed, and capable of *producing* a disease in other animals, when introduced by a puncture, which affects *their* spleens and causes death. The same was found to be the case with the spleens of animals living in marshy countries, where intermittents prevail. This is a very curious and

interesting fact, which seems to be corroborated by one related by M. Adouard, and which we shall append to this paper.

Pemphigoid Affection of the Spleen, producing a Contagious Material. By M. Adouard.—The following case was published at the time of its occurrence in the Annals of the Medical Society of Montpellier. It is here republished, for the reasons above mentioned.

A French cavalry soldier was affected for some time with ague, in the malarious countries about Lodi. When M. Adouard took charge of the Military Hospital, this man was cured of the ague, but laboured under a considerable enlargement of the spleen. This was much reduced by proper means, and the patient was nearly re-established in general health, when he suddenly expired one morning, without any thing to account for the fatal event.

On dissection, nothing could be discovered except the enlargement of the spleen, on the surface of which were several phlyctenæ, of different sizes, elevated, nearly colourless, and containing a yellowish fluid, like that of pemphigus. A drop of this fluid came in contact with a chap on one of M. Adouard's fingers, and caused instant stinging pain. This was followed, in eight hours, by such constitutional disturbance as to force him to quit a company in which he was spending the evening, and retire to bed. At midnight, he had a severe rigour of two hours' duration, followed by intense fever, and, ultimately, by perspiration and comparative apyrexia. Next day, there was an ugly looking pustule on the part affected, and his whole mental and physical powers were prostrated. Great swelling and inflammation of the hand and arm followed, with fever of a *remittent character*, but extremely severe. On the 7th day, he was delirious, and a copious perspiration solved the fever. A large suppuration had formed among the muscles of the fore-arm, which was opened, and then the patient rapidly convalesced.—*Journal Général.*

The above case may be considered, by many, as analogous to those of dissection wounds; but, if M. Dupuy proves that blood, or the contents of phlyctenæ in the spleens of animals, produce, by inoculation, similar diseased states of spleen in other animals, as he pledges himself to do in a Memoir about to be published, the case will assume an importance beyond that of common dissection wounds. We shall lay before our readers an early account of the promised Memoir.

From the Transactions of the London Medico-Chirurgical Society.

Case of Phlebitis.—This case was read at the Society on the 27th February, 1827, and the morbid preparation exhibited to the members. It was considered by those who have adopted Dr. Davis's doctrine of phlegmatia dolens, as an excellent corroboration of that doctrine; but our readers will soon see the weakness of the support thus obtained.

The patient was a young man of 26 years, conceived to be labouring under pulmonary consumption, accompanied by "swelling of both ankles." The swelling of the right ankle, however, gradually subsided, while that of the left extended upwards and increased, attended with pain about the ankle and calf of the leg, knee, ham, groin, and lower part of the abdomen. With these symptoms, the whole limb became hotter than the other, and tender on pressure. Dr. Forbes saw the patient for the first time on the 31st October, a week before his death. He was then in the last stage of pulmonary consumption. The limb was double the size of the other, "and every where it pitted on pressure." The colour of the skin was whiter than natural, and presented the exact resemblance of "common anasarca." The subcutaneous veins above the ankle were distinctly marked, and distended with blood. Died on the 8th November.

The dissection was performed by Mr. Grainger. The saphena major and its branches were greatly distended, and filled with coagulated blood, but their coats were not diseased. The cellular tissue of the whole limb was infiltrated with a limpid fluid, and the lymphatic glands in the groin were rather enlarged. The femoral vein was filled with coagulated blood.

"The dissection was continued so as to expose the left iliac veins. The trunk of the external and common iliac vessels found was even more distended than the femoral vein. The common iliac vein had an unnatural colour, approaching to a greenish hue; and it seemed as large as the inferior cava.

The distention of this vessel suddenly terminated at that part where it is united with the right common iliac vein. The left internal iliac vein was filled with blood for about two inches of its course, and the rest of it appeared natural.

"The femoral and iliac veins on the right side were nearly empty, and quite healthy in their appearance, forming a strong contrast when compared with the gorged and distended state of the veins on the left side.

"On laying open the upper part of the femoral vein, as well as the external and common iliac veins, they were found filled with a coagulum, of much firmer consistence than is usually met with in healthy veins; and had much of the fibrous appearance of the blood which is found contained in aneurismal sacs. On separating this coagulum, a thin but distinct membranous layer was seen adherent to the internal coat of the vein, and it required some force to separate them. The femoral vein, which was examined as far down the limb as the triceps muscle, was found in the same condition." 296.

We perfectly agree with Dr. Forbes that the morbid appearances in this case were very similar to those which have been described by Dr. Davis in his paper on phlegmatia dolens—but on that very account we maintain that this was not a case of phlegmatia dolens, but one of phlebitis. In a former number we have

taken such pains to disprove Dr. Davis's theory, that we need not recur to the subject again. If phlegmatia dolens depended on inflammation of the inguinal and iliac veins, three-fourths of the patients would die—whereas death does not take place in one case in the hundred where that disease is exquisitely marked. This fact would be sufficient to disprove the identity—but there are numerous others reasons for refusing acquiescence in Dr. Davis's views.—*Medico-Chirurgical Review.*

From the London Medical and Physical Journal.

EXPERIMENTS ON THE FUNCTIONS OF THE EAR.

The following details are taken from a communication, by Mr. Wheatstone, to the Journal of Science.

§ 1. If the hand be placed so as to cover the ear, or if the entrance of the meatus auditorius be closed by the finger without pressure, the perception of external sounds will be considerably diminished, but the sounds of the voice produced internally will be greatly augmented: the pronunciation of those vowels in which the cavity of the mouth is most closed, as *e*, *o*, *u*, &c. produce the strongest effect: on articulating smartly the syllables *te* and *kew*, the sound will be perfectly loud.

Placing the conducting stem of a sounding tuning-fork* on any part of the head, when the ears are closed as above described, a similar augmentation of sound will be observed. When one ear remains open, the sound will always be referred to the closed ear; but, when both ears are closed, the sound will appear louder in that ear the nearer to which it is produced. If, therefore, the tuning-fork be applied above the temporal bone near either ear, it will be apparently heard by that ear to which it is adjacent; but, on removing the hand from this ear, (although the fork remains in the same situation,) the sound will appear to be referred immediately to the opposite ear.

In the case of the vocal articulations, the augmentation is accompanied by a reedy sound, occasioned by the strong agitations of the tympanum. When the air in the meatus is compressed against this membrane by pressing the hand close to the ear, or when the eustachian tube is exhausted by the means indicated by Dr. Wollaston, the reedy sound is no longer heard, and the augmentation is considerably diminished. The ringing noise which simultaneous accompanies a very intense sound, proceeds from the same cause, and may be prevented by the same means. This ringing may be produced by applying the stem of a sounding tuning-fork to the hand when covering the ear, or by whistling when a hearing-trumpet is placed to the ear. As a proof that the resulting augmentation, which, when great, excites the vibrations of the tympanum, is owing to the reciprocation of the vibrations by the air contained within the closed cavity, it may be mentioned that, when the entrance of the meatus is closed by a fibrous substance, as wool, &c. no increase is obtained.

If the meatus and the concha of one ear be filled with water, the sounds above mentioned will be referred to the cavity containing the water, in the same way as when it contained air, and was closed by the hand: it will be indifferent whether any partition be interposed between the cavity and the external air, as the water is equally well insulated by a surface of air as by a solid body.

§ 2. The preceding experiments have shown that sounds immediately communicated to the closed meatus externus are very gently augmented; and it is an obvious inference, that if external sounds can be communicated so as to act on the cavity in a similar manner, they must receive a corresponding augmentation. The great intensity with which sound is transmitted by solid rods, at the same time that its diffusion is prevented, affords a ready means of effecting this purpose, and of constructing an instrument, which, from its rendering audible the weakest sounds, may with propriety be named a microphone.

Procure two flat pieces of plated metal, each sufficiently large to cover the external ear, to the form also of which they may be adapted; on the outside of each plate, directly opposite the meatus, rivet a rod of iron or brass wire, about sixteen inches in length, and one-eighth of an inch in diameter, and fasten the two rods together at their unfixed extremities, so as to meet in a single point. The rods must be so curved, that when the plates are applied to the ears, each rod may at one end be perpendicularly inserted into its corresponding plate, and at the other end may meet before the head in the plane of the mesial line. The spring of the rods will be sufficient to fix the plates to the ears, but for greater security ribands may be attached to each rod near its insertion in the plate, and be tied behind the head.

A more simple instrument may be constructed to be applied to one ear only, by inserting a straight reed perpendicularly into a similar plate to those described above.

The microphone is calculated only for hearing sounds when it is in immediate contact

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* The tuning-fork consists of a four-sided metallic rod, bent so as to form two equal and parallel branches, having a stem connected with the lower curved part of the rod, and contained within the plane of the two branches. The branches are caused to vibrate by striking one end against a hard body, whilst the stem is held in the hand. The sound produced by this instrument, when insulated, is very weak, and can only be distinctly heard when its branches are brought close to the ear; but instantly its stem is connected with any surface capable of vibrating, a great augmentation of sound ensues from the communicated vibrations. The facility of its insulation and communication renders it a very convenient instrument for a variety of acoustical experiments.

with sonorous bodies: when they are diffused by their transmission through the air, this instrument will not afford the slightest assistance.

It is not my intention in this place to detail all the various experiments which may be made with this instrument; a few will suffice to enable the experimenter to vary them at his pleasure.

1. If a bell be rung in a vessel of water, and the point of the microphone be placed in the water at different distances from the bell, the differences of intensity will be very sensible. 2. If the point of the microphone be applied to the sides of a vessel containing a boiling liquid, or if it be placed in the liquid itself, the various sounds which are rendered, may be heard very distinctly. 3. The instrument affords a means of ascertaining, with considerable accuracy, the points of a sonorous body at which the intensity of vibration is the greatest or least: thus, placing its point on different parts of the sounding-board of a violin or guitar, whilst one of its strings is in vibration, the points of greatest and least vibration are easily distinguished. 4. If the stem of a sounding tuning-fork be brought in contact with any part of the microphone, and at the same time a musical sound be produced by the voice, the most uninitiated ear will be able to perceive the consonance or dissonance of the two sounds; the roughness of discords, and the beatings of imperfect consonances, are thereby rendered so extremely disagreeable, and form so evident a contrast to the agreeable harmony and smoothness of two perfectly consonant sounds, that it is impossible that they can be confounded.

§ 3. Apply the broad sides of two sounding tuning-forks, both being unisons, to the same ear; on removing one fork to the opposite ear, allowing the other to remain, the sensation will be considerably augmented.

It is well known, that when two consonant sounds are heard together, a third sound results from the coincidences of their vibrations; and that this third sound, which is called the grave harmonic, is always equal to unity, when the two primitive sounds are represented by the lowest integral numbers. This being premised, select two tuning-forks, the sounds of which differ by any consonant interval excepting the octave; place the broad sides of their branches, while in vibration, close to one ear, in such a manner that they shall nearly touch at the acoustic axis, the resulting grave harmonic will then be strongly audible, combined with the two other sounds; place afterwards one fork to one ear, and the consonance will be heard much richer in volume, but no audible indications whatever of the third sound will be perceived.

§ 4. Very acute sounds, such as the chirping of the gryllus campestris, &c. are rendered inaudible by exhausting the air from the eustachian tube, and thereby producing a tension of the membrane of the tympanum: the different thicknesses or tensions of this membrane may therefore occasion that diversity of the limits of audibility, with regard to the acute sounds which Dr. Wollaston has pointed out as existing in different individuals; if so, it would be desirable to ascertain this limit in individuals in whom the tympanum is perforated or destroyed.

§ 5. When the auricula is brought forward, all acute sounds are rendered much more intense, but no sensible difference is perceived with regard to the grave sounds. The higher tones of glass staccados, or of an octave flute, the ticking of a watch, all kinds of sibilant sounds, &c. are thus greatly augmented: the experiment is easily tried, by whistling very shrill notes. A still greater augmentation of the acute sounds is obtained, by placing the hands formed into a concave behind the ears, and by bending downwards the upper part of the auricula, so as to obtain a more complete cavity.

§ 6. I will conclude with the following observation:—I had, in consequence of a cold, a very slight pain in my left ear; on sounding the regular notes of the piano-forte, C^3 and C^4 were much louder than the others, and the loudness was much increased by placing the hand in the manner above described to the left ear. When it was pressed close, or when the eustachian tube was closed, the intensities of all the notes were equalised. I attribute this affection to the diminished tension of the membrana tympani, which was again increased by the operation described.

From the London Medical and Physical Journal.

CASE OF EPILEPSY. Detailed by the PATIENT.*

Sir,—I have for some years past been myself subject to this painful and dangerous complaint, and have taken much pains to investigate its cause, and ascertain its symptoms. I have consulted many medical works upon the subject, as well as taken the opinion of medical men; but have never yet met, from one or the other, with a correct statement of the symptoms of the disorder. The description of them in both cases has been general, and such as would not inform a patient clearly whether he had epileptic fits or any other. These circumstances have induced me thus to publish my case, which I consider to be that of true and genuine epilepsy, for the use of the public at large, being thoroughly convinced that no person can so well describe the symptoms as those who, like myself, have had many attacks of it, and have attentively considered the preliminary sensations which indicate its approach.

The symptoms, as I have experienced them, are as follow:—First, sudden faintness comes on, attended by impeded respiration; a sense of tension and heat are felt on the left side of the stomach, just under the heart, which begins to beat with great violence, accompa-

* A very intelligent man, not a member of the profession.

nied by an universal tremour. The right eye is then affected, and there is a defect of vision and great pain in the muscles of the eye; tears are forced out in considerable quantities from both eyes; the muscles of the right eye feel to be drawn to the right with great violence; and the vision is obscured by the light assuming a prismatic appearance, and during the convulsion, a perfect rainbow is seen, which appears to ascend, and the eye mechanically seems to follow it. The left eye is then affected in the same manner, but not to quite so great a degree; and the muscles of the face neck, arms, and legs, and lastly the whole body, become convulsed. The patient now falls down; the carotid artery, and the temporal arteries, throb with great force. The heart also flutters, and that with intermission; the pulsation at the wrist is scarcely felt, and sometimes is wholly suspended. The mind is filled with strange ideas of cataracts, voices, rattling of carriages, &c.; and there is great noise in the ears, arising, no doubt, from the impeded circulation of the blood through the carotid artery. The head now begins to turn round towards the right shoulder, whilst there is a sensation at the heart as if it were grasped in the hand. The eyes are violently convulsed, and the prismatic corruscations are more quick and vivid; the senses are obscured, and the breathing quick and laborious, till, in about half a minute after, the head becomes giddy, and animation (or at least consciousness) is suspended.

Till the head turns, I have not lost the power of thinking, and even asking advice, though this requires great exertion, owing to the convulsion of the mouth and throat. Having had many of these attacks, perhaps a dozen or more, I have become so perfectly acquainted with all the symptoms that occur, that I have divested my mind, by reflection, of any fear of them, and have in a few instances, once or twice, prevented their occurrence, so late as the first appearance of the corruscations, by immediately lying down on my back, and calming myself by an exertion of self-command, which, though difficult on account of fear, yet, when that is subdued by reflection, the mental operations can go on without interruption.

By doing this in time, (that is, two or three minutes after the first symptoms of faintness and impeded circulation at the heart,) and taking half a wine-glass of any spirit, I have found that the pulsation becomes more regular, the corruscations cease, and the fit is prevented. But there will still remain an unequal action of the pulse, a twitching of the tendons, a dulness and sense of weight and pain in the head, and a tendency to relapse, which requires great firmness of mind to resist. These symptoms will continue for three or four hours; and I have sometimes known them succeeded by a general shaking, like an ague, but without any sense of cold: on the contrary, there has been a glow all over the body.

The above prismatic corruscations take place at an angle with the axis of the eye, and the rays of light begin to oscillate as a perfect white light at first, of extreme brightness; they then become refracted, their corruscations increase in quickness, till they assume the most perfect and vivid appearance of the prismatic series.

The rationale of this phenomenon appears to be the convulsion that takes place in the muscles of the eye. The humours being thus thrown out of their proper form into various irregular figures by the convulsion, must naturally refract the rays of light, and thus form on the retina the prismatic spectrum, which is transmitted to the common sensorium; and this can only account for the appearance, or rather the fancied appearanec, of the spectrum when the eyes are closed. I conceive it would be difficult, if not impossible, to produce this effect by artificial means, as it would be necessary to procure a natural eye, or gelatinous substances of the same qualities in every respect, and to give them, by galvanism or other means, the convulsive motions in precisely the same manner as in epileptic fits.

There is another singular affection to which I am sometimes subject, which is a quivering light, assuming during its continuance various figures, commencing at the exterior angle of the eyes, (the right beginning first,) and going off either over the eyebrow, or next the nose. All objects viewed at this time are obscured in part by the corruscations, and the effect produced is like that of looking through a pane of glass. which by a defect in its manufacture is wavy.

This appears to be produced by a convulsion of the iris, which, rendering its contractions and irritations unequal, would naturally produce the effect described without any prismatic phenomenon.

From the Medico-Chirurgical Review.

MORBID SENSIBILITY OF HALF THE BODY.

(M. Martinet. Hôtel Dieu.)

A young man, aged 25 years, had enjoyed good health till the age of 14, when he was affected with giddiness, which returned periodically every month. On the 5th March, 1827, this young man was compelled suddenly to separate from his wife, and took the affair greatly to heart. On the evening of the same day, he was suddenly seized with a sense of weight in the right arm and leg, accompanied by a certain degree of loss of power in those parts. In this state, he fell several times while attempting to walk, and felt as if he was half intoxicated. The next day (6th,) he came into the hospital, and was in precisely the condition above described. He was bled in the evening, and sinapisms were applied to the feet. 7th. M. Martinet himself now saw the patient. The motility of the right side was but little diminished; the principal derangement was of the sensibility. The whole of the *right half of the body* (as exactly as if a line were drawn, behind and before, from the

vertex to the perineum) was exalted much in its sensibility, while the opposite side was in its normal condition. The line of demarcation between the morbid sensibility and the normal, was extremely exact. Thus, friction or stimulation on one side of the umbilicus, would excite the most insupportable feelings; while the same, on the other side, would occasion no inconvenience. A similar inequality of sensibility was observable in the two sides of the tongue and in the two nostrils; but no difference was observable in the two eyes, as to the impressions of light. The sense of smell and of taste were equal and good on both sides, though the common sensibility to touch was so unequal. Although his intellectual powers appeared unaffected, he had great difficulty, and sometimes an inability to pronounce his words, or clothe properly his ideas with language. At this he was very much vexed; and warned his medical attendants not to trust always to the words he uttered, as he was conscious of their being wrong, though he had not the power to put them right.

In other respects, this man was free from fever, slept well, and all the natural and vital functions went on regularly. *He was again bled.* 8th. He complains of acute pain in the *left* temple; but is otherwise the same as yesterday, except that the morbid sensibility of the right side of the body is somewhat diminished. *Twelve leeches to the left temple.* 9th. The pain is much relieved, and the sensibility of the right side still farther reduced. It was observed that the patient had made no water since the preceding day. *Catheterism —warm bath.* 10th. The morbid sensibility was lowered to the normal degree, except in one thigh, where it was still too great. The pain of the left temple was gone, and the patient was evidently convalescent. On the 17th, was discharged cured.

M. Martinet has headed this case "Encephalitis," and goes on to maintain that he is correct in the term. It appears that the young man, though a mechanic by occupation, was in the habit of reading a great deal of poetry, philosophy, and the belles lettres:—it is, therefore, concluded, that his ideas were habitually exalted above those in his own rank of life. After a bitter moral affliction, he is suddenly seized with weakness in the members of the right side, and a sense of intoxication. These symptoms, our author observes, must be referred to the brain. And what kind of affection was it in the brain? He can conceive no other state than that of inflammation which could produce the phenomena above described. We are of a very different opinion. We would attribute those curious symptoms rather to *irritation* than to inflammation—and we should be much disposed to consider this irritation as a sympathetic, rather than an idiopathic affection of the brain and nervous system. We could adduce many examples of a moral affliction deranging the functions of the liver, stomach, and other digestive viscera, which deranged functions affected the brain and nervous system secondarily, and induced partial paralyses, and other disorders of the brain and spinal marrow. That there may have been some degree of vascular congestion in the *left* side of the brain, in the above case, is not improbable; but we can hardly bring ourselves to denominate the disease "*Encephalitis.*" The diminution of muscular power in the *right* side of the body might certainly be owing to some fulness in the cerebral vessels of the opposite side; but, that the *super-sensibility* of that side is to be placed to the account of *inflammation* of the brain, at a time when there was no febrile symptom present, and no apparent disturbance of the vascular system, is a proposition that might startle even Dr. Clutterbuck himself.

The case, however, is very interesting in some other respects. If we find that moral afflictions can lead to, or actually produce, an inordinate degree, or, more properly speaking, a *morbid sensibility* in one half of the body, is it unreasonable to believe that the same causes may, in other instances, produce a similar morbid sensibility in certain surfaces of the interior organs, as of the stomach and upper intestines? We are convinced that these moral causes do very commonly produce this effect; but, as the sensibility of these surfaces is *organic* and not common sensibility, so the *effects* are masked, and show themselves in a host of anomalous symptoms, which are puzzling in the extreme to the medical practitioner.

From the Lancet.

OBSERVATIONS ON THE DISSECTING AND PREPARING OF THE BODIES OF ANIMALS.

Though the art of anatomizing the bodies of animals is essentially the same as that practised upon the body of man, and though want of space precludes me from treating the subject minutely, I conceive that a few remarks may not be altogether unacceptable to those who feel desirous of pursuing such studies for themselves.

The first thing that I have to observe is, that all dissections of small soft objects, e. g. worms, zoophytes, insects, mollusca, and embryos, where it is desirable to obtain even tolerably accurate results, should be performed *under water*, by which the parts are kept floating and separated from each other, and, consequently, present themselves more distinctly. A very simple contrivance for investigations of this kind, may be prepared in the following manner: a mass of tough wax (not too soft) is to be laid upon one or more porcelain saucers or capsules of different sizes, which are then to be put in a warm place until the wax melts, so as to cover the surface evenly to the depth of one-half or one-third of an inch. If the object to be examined be laid upon this surface, it may be fixed by needles in any position that is wished, and when covered with clear water, developed and dissected by means of suitable instruments.

Of them, the best are very delicate forceps, pointed, well made, sharp cutting scissors, and small knives like cataract needles, some round, others with cutting edges, and fixed in slender wooden handles. For separating parts, I have also employed small horn probes, and fine brushes; whilst, for examining them, a good magnifying glass is frequently indispensable. If it is wished to preserve a preparation thus made, wax coloured at pleasure as for the purpose of injections, is to be formed into little tablets about one-fourth of an inch thick; one of these is then to be placed upon the saucer or capsule containing the preparation; the latter may then be transferred to it, arranged suitably upon it, fixed there by means of short needles, and both together then placed in alcohol. Nor must I forget to mention, that the examination of very delicate organizations may frequently be conducted with greater facility and accuracy, if the object be previously allowed to remain some time in spirit, and thereby to become harder and contracted. This applies particularly to the dissection of nervous organs, and to the examination of very small embryos, of mollusca, and worms.

There are various modes of destroying worms, insects, mollusca, &c., for the purpose of dissecting, without injuring their organization: mollusca and snails, for instance, as Swammerdam has remarked, are to be allowed to die in water, because by that means their body swells, and all the parts become more distinctly visible; they may afterwards be kept in spirit (though not too long) for dissection. Worms, the larger zoophytes, (for the smaller must be examined whilst alive,) caterpillars, &c., and also the smaller amphibia and fishes, are best destroyed by means of spirit. Insects, on the contrary, by being dipped rapidly in boiling water, or in oil of turpentine.

As regards the dissection of larger animals, we may here use with advantage knives of a large size, and instead of forceps, suitable hooks with handles.

In animals of a considerable size, we can generally make artificial skeletons only, after the bones have been sufficiently cleaned by boiling or maceration. In smaller animals, on the contrary, such as birds, amphibia, and fishes, of which last it is very difficult to make good skeletons, the object will be best accomplished by at once making the bones as clean as possible, without injuring the capsular ligaments, soaking the preparation in water that is incessantly changed, and, lastly, bleaching it for some time in the sun.

Lastly, we may mention injections as affording a very essential assistance in zootomical investigations for physiological purposes; in small animals, and in the more minute parts, these must consist of compositions with wax, very fluid and coloured; but above all, of mercury. The latter, however, is not suitable for very soft bodies, e. g. medusæ, &c., in which cases we may employ injections of coloured milk and similar substances. *Gore's Translation of Carus's Comparative Anatomy.*

Medical and Philosophical Intelligence.

The Archives Générales de Médecine contains some observations by M. Mirault on the method of operating for fistulæ of the parotid duct, as originally proposed by M. Deguise, and modified by Beclard. This operation, it will be remembered, consists in a simple vertical incision four lines in length, passing through the centre of the fistulous opening, and penetrating as far as the buccinator muscle. At the bottom of the incision, corresponding to the orifice of the duct, two punctures are made into the mouth, by means of a trocar, in contact externally, but diverging horizontally as they proceed inwards, so as to resemble the letter V, the diverging branches including of course a portion of the buccal parietes. The two extremities of a leaden wire are next passed through the punctures from without inwards, and either bent so as to form an obtuse angle in the mouth, or twisted together as recommended by Beclard. The external incision is united by means of the twisted suture. This mode of procedure has been practised by Beclard in several instances with the most entire success; the cure being completed in a much shorter time than by the ordinary method. To obviate the inconvenience attending the long continued presence of the wire in the mouth, a period sometimes extended to several months, and the difficulty of tightening it so as to enable it to make its way through in a shorter space of time, M. Mirault proposes a thread ligature, of which the extremities passed through a serre-nœud can be tightened at pleasure. A case is detailed in which this substitution was made; it failed, however, owing to some peculiar circumstances, and the leaden wire was ultimately resorted to with success. With a view to suspend the flow of saliva twenty-four or thirty-six hours, the trocar was passed in this instance, above and below the extremity of the duct, so as to include and compress the latter in its flexure, this modification would be useless in a case of simple fistula. In order to avail himself of the facility afforded by the canula, to pass the second end of the ligature, M. Mirault caused the instrument to be made without the wing, and was thus enabled to extract it through the mouth. For want of such a contrivance M. Beclard made one of the punctures from within outwards.

Six cases of erysipelas are related by M. Bonet, successfully treated by the application of leeches to the affected part. In one instance, the disease, situated upon the head, neck, and anterior part of the thorax, had been treated by emetics, cathartics, and venesection from the left foot, and had ultimately passed into a chronic state; an exacerbation occurring every seven or eight days. Wearied with such a state of things, which continued during six weeks, M. Bonet directed the application of twenty-two leeches to the part, and two hours after the *hirudination*, the erysipelas entirely disappeared, to return no more. In the other cases, its remedial agency was almost equally apparent. M. Gros, appointed by the academy to report upon the memoir of M. Bonet, remarks that the plan pursued by the latter, is not always the best adapted to the treatment of erysipelas; instances being numerous in which emetics, &c. have succeeded, after depletion, both general and local, had been tried ineffectually. It is particularly inapplicable to cases preceded by bilious symptoms, and accompanied by a moderate degree of fever; when, on the contrary, the pulse is hard and frequent, and the febrile action runs high, more favourable results may be anticipated.—*Nouv. Biblioth. Méd. &c.*

Diuretic Properties of the Equisetum.—The different species of this plant have been highly extolled by Professor Leuhossek of Vienna, as active diuretics, not affecting in their operation the digestive, circulatory, and cerebral functions, and in this respect, therefore, preferable to the digitalis, colchicum, and other remedies of that class. In atonic dropsies, and those consequent upon exanthematous diseases, they have appeared to him to produce their best effect; and to be, on the contrary, contra-indicated in cases attended with increased vascular action. The diuretic property, though possessed by all the species of the genus, is much more energetic in the *equisetum hiemale* and *e. limosum* than in the others, to the extent, in some instances, of producing hæmaturia. In its recent state, the equisetum evinces great activity, and it is on this account that Professor Leuhossek gives the preference to the dried plant. It is administered either in powder or decoction, the latter is generally preferable; two or three drachms of the vegetable are boiled in a pint of water during a quarter of an hour, and of this decoction, one or two spoonfuls are given to children, according to circumstances, and from three to six ounces to adults.—*Jour. de Chimie Médicale, &c.*

MM. Chevallier and Rayer, recommend the administration of the hydro-sulphuric acid and the alkaline hydro-sulphurets in the colic arising from lead. A pound of water, holding in solution twelve grains of carbonate of soda, is saturated with the acid, and afterwards mixed with nineteen pounds of the same fluid; or, five grains of the sulphuret of potash may be dissolved in one pound of water; either of these solutions is given in quantity proportioned to the presumed amount of lead introduced into the system, with a view to its neutralization. Cathartics to obviate constipation, and opium to relieve pain and procure sleep, are employed conjointly with the preceding remedy.

This plan of treatment has been employed by M. Rayer at the Hôpital de la Charité, in several cases, with entire success; the disease sometimes disappearing after the second day, often after the third or fourth, and rarely being prolonged to the sixth day. No instance of relapse has hitherto fallen under his observation—*Ibid.*

Perforation of the Intestine—Don José Benito, licentiate in medicine, was requested to visit a woman, forty-four years of age, who had been long troubled with worms, which were frequently discharged both by the mouth and anus; she was then suffering under an acute attack of enteritis. The violence of the symptoms rapidly yielded to the repeated application of leeches, aided by a rigorous diet, emollient fomentations, &c. The fever, however, did not entirely disappear, and some degree of pain still continued in the right groin; the patient mentioned, that for the last two years, she had had in that part, a tumour about the size of a nut—she would not permit an examination. Fomentations, diet, &c. were directed. The two following days, the tumour increased in size, with an augmentation of temperature, pulsating pain, &c.; bilious vomitings supervened, and there was aggravation of all the symptoms. An examination being made at this period, the swelling was found to possess the characters of a common phlegmon, extending upwards upon the abdomen, and downwards upon the thigh, to the extent of some inches. The fourth day of the local inflammation, there was an evident fluctuation in the tumour, and towards evening a gangrenous spot was observed upon its centre; a lancet introduced into this part gave exit to a dark grayish matter, and on examining the abscess, an ascaris lumbricoidis was found in its cavity. A female catheter, directed towards the crural arch, gave passage to a quantity of gas, and another worm was discharged. Compression was applied upon the wound, a horizontal position, &c. enjoined, and it was shortly reduced to a fistulous opening, from which were discharged worms and liquid fæces at each renewal of the dressings. Anthelmintics were prescribed, the compression upon the wound augmented, and an entire cure was ultimately affected.—*Diario General de las Ciencias Medicas.*

Belladonna.—The alleged preventative property of this article in cases of scarlatina, induced Dr. Velsen of Cleves, to test its efficacy in an epidemic which prevailed at that place during the past year. The number of those to whom it was administered amounted to 247, of both sexes, and of every age, from infants at the breast, to adults of forty or fifty

years. Two grains of the extract were dissolved in two ounces of distilled water, to which was added two drachms of alcohol, and of this solution, five, ten, fifteen and twenty drops, according to the age of the person, were taken twice a day. The administration of the medicine was continued during the prevalence of the epidemic. Of the 247 who were the subjects of the experiment, thirteen only contracted the disease, and in them, according to Dr. Velson, it assumed a milder character than in those who were not submitted to this preventative treatment. The following are the conclusions which he has drawn from his observations: 1st, in the great majority of cases the belladonna is a preservative against scarlet fever; 2d, where it fails to produce this effect, the disease is much milder than in cases where it has not been given; 3d, administered according to the preceding formula, it is productive of no unpleasant consequences.—*Journal Complémentaire, &c.*

Chorea.—M. Lisfranc, has lately successfully treated a case of chorea, by general bleedings, and the repeated application of leeches to the upper part of the spine; he had adopted this mode of treatment, from having been informed by M. Serres, that he had almost always found the tubercula quadrigemina in a state of inflammation, in the bodies of those who died of chorea. In four cases of this disease examined by that gentleman, he found the tubercula quadrigemina diseased; in one, a fatty tumour was developed on these bodies; in another, there were marks of considerable excitement, with bloody effusion at their base; in the two last cases, the whole of the substance of the quadrigemina was inflamed, and the inflammation extended to the roof of the fourth ventricle. The symptoms appeared to him to have some connexion with an injury of this part of the brain. M. Serres tried experiments on living animals, and found that those in which this part of the brain was injured, had motions similar to those observed in chorea. M. Rolando had also observed this fact in his experiments. M. Serres was not however disposed to conclude, that in every case of chorea the tubercula quadrigemina were diseased; he had seen several in which no lesion of the brain could be discovered. As persons afflicted with this disease generally experience great pain at the back part of the head, above the region of the neck, he had been induced to apply remedies to this spot, and in this way had often cured the complaint in its acute state; but when it becomes chronic, the frequent application of leeches in the neighbourhood of the supposed seat of the disease, is productive of no benefit.—*Jour. General de. Med.*

The regeneration of the nervous tissue, long denied by some physicians, and as confidently affirmed by others, appears at present to be admitted as an indisputable fact. M. Prevost has repeatedly made the experiment on kittens, of removing portions of the pneumogastric nerve on each side, at longer or shorter intervals, and has arrived at the following conclusions. 1st, in order that the nervous influence be re-established, it is not enough that the nerve be connected by the cellular tissue, which soon interposes itself between the divided extremities; 2d, it is indispensable that the nervous fibrillæ be prolonged through this intermediate substance, from the superior to the inferior exeremity; 3d, this prolongation does not take place till after a considerable lapse of time. The elongated filaments are not in regular juxtaposition as in the other parts of the nerve, but separated from each other as if they had traversed with difficulty the interposed cellular tissue.—*Bull Univ.*

Tuberculous Excrescences on the Hands and Feet; by the late Dr. Behrends, communicated by Dr. G. Soemmering.—The excrescences, which were of a horny consistence, and firmly adherent to the parts beneath, occupied the palmar surface of the hands and fingers, and the soles of both feet. The unfortunate sufferer was entirely deprived of the use of his limbs, by reason of the acute pain occasioned by the slightest pressure upon the tubercles. M. Soemmering refers to three analogous cases, one related by Behrends in the Medizinich-Chirurg. Zeitung, and two others by Dr. Ash, and subjoins some general remarks upon the nature of the disease, &c. It is the ichthyosis cornea of authors —*Litterar. Annal. der ges. Heilkunde.*

Osseous Concretions in the Substance of the Placenta; by Professor Carus.—These bony or calcareous concretions are more frequently met with at certain periods than at others, without its being possible to assign any cause for this difference. In the city and environs of Dresden, it is calculated that they occur in the proportion of two or three cases in the hundred, and that out of an equal number, there are from five to eight cases of granulated indurations in the tissue of this viscus. Women of a scrofulous, cachectic constitution, and those affected with nervous diseases, present examples of this degenerescence more frequently than others, especially at the approach of the climacteric period of life. The concretions are seated on the uterine surface of the placenta; M. Carus has never observed them on the fœtal portion; they are not disseminated through the tissue of the organ, but concentrated towards some particular parts. Their consistence varies from that of coagulated albumen to a stony hardness, and to the touch they are not unlike the sabulous substance of the pineal gland. According to the analysis of Professor Ficinus, albumen in small quantity, carbonate and phosphate of lime, a minute proportion of phosphate of magnesia, and slight traces of sulphuric acid, doubtless combined with some salifiable base, were found to enter into their composition. In regard to the origin of these concretions, it is evident that they arise from the mother, whose health is already impaired in the greater

number of cases. M. Carus compares the process of their formation to that of the production of the solid covering of the egg in birds, &c. and cites in proof of his opinion, the phenomenon of the calcareous incrustation of the fœtus in prolonged uterine and extra-uterine pregnancies.

The effects of these morbid productions are oftentimes inappreciable; frequently, however, it is otherwise, and adhesions of the placenta, producing hæmorrhages, hysteritis, &c. &c. are not unusual consequences. May they not also exert some influence upon the development and life of the fœtus.—*Bull. Univ.*

Living Worms in the Circulation.—In making some microscopical observations on the circulation of the blood in the mesentery of the rana bombina, M. Schmitz accidentally discovered these animalculæ, figures of which he has given. They were only observed in two individuals of the species above designated, out of fifty-five which were examined. These researches were extended to lizards, salamanders, and the common frog (rana temporaria et esculenta) but nothing similar was observed. The insects observed by M. Schmitz strongly resemble the polypoma venarum of Treutler.—*Litterar. Annal. der ges. Heilkunde.*

New Experiments upon the extracts of Quassia, Simarouba, &c. by Dr. Buchner. One grain of the alcoholic extract of quassia applied to a wound on the thigh of a rabbit, did not appear to produce any marked effect upon the animal, and no inflammation was excited. Notwithstanding which, the animal became melancholy and died, thirty hours after the experiment. Nothing remarkable was observed upon dissection. The same experiment, repeated on a larger rabbit, was attended with a similar result.

An alcoholic extract of simarouba bark employed after the same manner, produced a similar result; two grains caused the death of the animal in twenty-four hours, without pain or inflammation. M. Buchner infers from these experiments, that the quassia amara and q. simarouba owe their activity to the same principle, quassine, and that this should be classed with the narcotic alkaloids.

The yellow bitter principle of colombo, is not only soluble in water and in alcohol, but also in ether. Acetate of lead does not precipitate it from its aqueous solution, from which it may be presumed, that this principle belongs also to the alkaloids.

One grain of the dry etherial extract of colombo was dissolved in water, and introduced into a wound made on a rabbit, the animal died in ten hours, without evincing any signs of pain or inflammation. Three grains of the alcoholic extract produced death at the expiration of three days; in this instance violent inflammation occurred, and it was ascertained upon examination, that the extract had not been entirely absorbed. This plant, belonging to the genus minispermum, of which the m. cocculus is a species, affords some support to the presumption that it contains an alkaloid principle.

An experiment made upon a rabbit with three grains of an alcoholic and etherial extract of gentian produced no effect whatever.

With MM. Robiquet, Guibourt, et Chereau, M. Buchner has been unable to detect *esculine*, an alkaloid principle announced by M. Cauzoneri as existing in the chesnut of the Indies. The yellow substance obtained by the action of alcohol, appears, together with gentianine, to be of the nature of colouring matter; applied to a wound it was equally innocuous with the extract of gentian, and should not therefore be classed among the vegetable poisons.—*Bull. Univ.*

M. Lisfranc read to the *Academie Royale de Médecine*, a case of fatal hemorrhage from the wounds made by leeches, occurring in a female labouring under gastritis; the peculiarity of the case consists, in that up to the third day, not a drop of blood had flowed from the punctures; the woman retired to rest as usual, and the following morning was found dead, bathed in her blood.—*Revue Médicale.*

A more recent journal contains an instance of death from the bite of a single leech, a short distance beneath the umbilicus. The patient, a young man, was brought to the Hôtel Dieu, in a state of insensibility. The abdomen was covered with blood, which still continued to issue from the wound. M. Miquel immediately cauterized the part, and thus arrested the hemorrhage, but his assistance came too late to be effectual; the patient dying half an hour after his entrance into the hospital.

According to MM. Edwards and Vavasseur, the middle and inferior cervical ganglions of the great sympathetic, exert no immediate influence upon the motion of the heart: they adduce the following experiment, repeatedly performed upon dogs and kittens, in support of their assertion. After having opened the chest of the animal, they extirpated the middle and inferior cervical ganglions, and it was invariably observed, that the action of the heart continued with the same regularity for the space of thirty minutes, and in some instances even an hour, although the respiration ceased immediately after opening the thorax.—*Annal. des Sciences Nat.*

According to an Analysis made by M. Dulong D'Astafort, the root of the polygala senega contains—1st. A peculiar matter, not alkaline, of a very acid taste, resembling that of the plant from which it was derived. This substance M. d'Astafort regards as the active principle of the senega.

2d. Resin. 3d. Gum. 4th. A substance analogous to wax. 5th. A yellow colouring matter. 6th. A principle reddening by the action of concentrated sulphuric acid. 7th. *Acide pectique.* 8th. Phosphate of lime. 9th. The super-malates of potash and lime. 10th. Sulphate of potash. 11th. Chlorure of potassium. 12th. Iron. An analysis of the same plant, by

M. Feneulle, is much in accordance with the above. The following are the results which he has obtained. A yellow colouring matter, a bitter substance, gum, *acide pectique*, albumine, a volatile oil, fixed oil, super-malates of lime and other salts. The yellow colouring matter is the resin of M. Dulong, and the bitter substance, that which this gentleman considers as the active principle of the polygala; as obtained by M. Feneulle, it was combined with a small quantity of colouring matter.—*Journal de Pharmacie, &c.*

M. Julia Fontanelle exhibited to the *Institut Royal de France*, beautiful specimens of a very white paper, which M. Poisson and himself had manufactured solely from the *glycyrrhiza glabra*. It does not require sizing. M. Fontanelle confidently anticipates still more satisfactory results. MM. Chaptal and Darcet were appointed commissaries to report upon this communication.—*Nouv. Bibloth. Méd. &c.*

Singular Effect of Cantharides.—Dr. Ammon advised the application of a blister to the chest of a person labouring under a slight attack of pleuritis, which had not entirely yielded to local depletion; the patient objected to its employment, alleging that a similar application some years before, had produced a severe blenorrhœa, which continued more than five weeks, notwithstanding an appropriate treatment. The blister was however applied, and produced its usual beneficial effects; some days after, the disease returning, the blister was renewed, and was followed by the appearance of a deep and suppurating ulcer on the glans penis; it presented none of the ordinary characters of syphilis. A solution of the acetate of lead was directed for the ulcer, under which treatment it healed in the space of three weeks.—*List. Annal. des ges. Heilk.*

In dissecting a fœtus, which had arrived at the sixth or seventh month of utero-gestation, Dr. Wedemeyer was much surprised to find, instead of the anus, a sort of pouch, containing a substance resembling the placenta, obliterated umbilical arteries, and a fœtus which appeared to have lived four or five months. Putrefaction had so far advanced, that it was impossible to distinguish all its parts; the head, sacrum, and several of the vertebræ were, however, distinctly visible. The sac enveloping these remains, communicated neither with the abdominal cavity or vertebral canal of the other child. The rectum of the latter terminated in a cul de sac.—*Jour. fur Chirurg. und Augenheilkunde.*

Progress of Medicine in Turkey—A treatise on anatomy, accompanied with plates, and written in the Turkish language, was published some years ago by Chani Zadeh, a member of the corps of Oulema; since which period, several improvements have been made in the medical department of that country; among others, the erection of several military hopitals, by order of Chosreü Pacha. One of them, in the vicinity of the mosque Chehtzade, is situated opposite the medical school with which it is connected; it is placed under the superintendence of well informed physicians, is well organized, and affords a source of clinical information to the students of medicine. The school and hospital are both comprised under the name of Tibchana. The majority of the students consists of young men whose fathers are employed in the service of the state, they have a particular uniform, are boarded, receive a monthly pension of 20 piastres, and are gratuitously instructed in the various sciences necessary to the profession for which they are destined. Besides their native language, they are taught also, the French, Italian, Arabic and Persian. The Hekim Bachi, or first Physician of the Sultan, presides at the head of this institution.—*Bull. Univ. &c.*

Indelible Writing.—As the art of man can unmake whatever the art of man can make, we have no right to expect an *indelible ink:* however, a sort of approximation to it may be made as follows:—Let a saturated solution of indigo and madder in boiling water be made, in such proportions as give a purple tint; add to it from one sixth to one eighth of its weight of sulphuric acid, according to the thickness and strength of the paper to be used: this makes an ink which flows pretty freely from the pen, and when writing, which has been executed with it, is exposed to a considerable, but gradual, heat from the fire, it becomes completely black, the letters being burnt in and charred by the action of the sulphuric acid. *If the acid has not been used in sufficient quantity to destroy the texture of the paper, and reduce it to the state of tinder, the colour may be discharged by the oxymuriatic and oxalic acids, and their compounds, though not without great difficulty.* When the full proportion of acid has been employed, a little crumbling and rubbing of the paper reduces the carbonaceous matter of the letters to powder; but by putting a black ground behind them, they may be preserved, and thus a species of *indelible writing* is procured, (for the letters are, in a manner, stamped out of the paper,) which might be useful for some purposes, perhaps for the signature of bank-notes.—*Quart. Jour. &c.*

Cantharides.—M. Farines, of Perpignan, has communicated to the Academy some interesting facts relative to these insects. It appears that their soft parts become the prey of another insect of the *acarus* tribe, whose attacks the hard parts of the lyttæ are capable of resisting. He has ascertained that the excrement of this *acarus* possesses a vesicatory property; but that, from experiments made with the powder of sound cantharides, that of mouldy cantharides, and that of the hard parts which escape the voracity of the parasite, the following inferences are to be drawn:—The first of these possesses the power of raising blisters; that the second is vesicatory in a minor degree; and that the third is inferior in this re-

spect to both the others. Mouldy flies may therefore be employed, but the quantity must be increased.

It is evident that the active principle of the cantharides resides in the soft parts of the insect. Camphor is not a protector against the *acarus;* and M. F. is of opinion, that the only preservative is the pyroligneous acid.—*Bull. Univ.*

Fallacy of Infusion of Litmus as a Test, by M. Magnus.—When pure water is heated for a sufficient time with infusion of litmus, reddened by an acid, it restores the blue colour. It is supposed that the heat gradually causes the free sulphuric acid, which had occasioned the reddening, to combine with the excess of alkali contained in the infusion, and thus to cause the restoration of the blue colour. Hence this preparation cannot be used to test the presence of ammonia in a solution, as water alone produces the effect anticipated from the alkali. The earthy salts contained in ordinary water also produce this effect.

Jour. de Pharmacie.

New Metals in the Uralian Platina.—The discovery of these metals by Professor Osann of Dorpat, is announced as follows, in Hensman's *Repertoire de Chimie* for September last.

"I have discovered in the platina of the Uralian mountains three metals, the properties of which are different from those of every other known metal. One of them occurs in the residuum left by the solution of the platina in aqua-regia, which is sold at the mint in Petersburgh. I have as yet found it only in one specimen of the metal.

"The oxide crystallizes in long prisms from the nitro-muriatic solution of the platina: these crystals sublime without undergoing any change, but at a higher temperature than required for the sublimation of oxide of osmium. Subjected to the blowpipe a portion of the salt sublimes, while another is reduced to a globule of metal. Sulphuret of ammonia converts the reduced metal to a gray sulphuret, which readily fuses, and burning in the air, it is converted into oxide.

"The second metal is found in the nitro-muriatic solution of the same platina; it possesses the following properties. The solution yields white acicular crystals, which soften in the heat of melting glass, and are reduced to the metallic state. Hydrogen reduces it to a metal of a gray colour with a tint of red: this metal did not melt, but retained the crystalline form of the oxide. Aqua-regia readily dissolves it, and sulphuret of ammonia precipitates it of a brown colour the precipitate being roasted in contact with air, becomes of a blackish-brown colour. These two metals are found in very small quantity in the Uralian platina, the latter in greater proportion than the former.

"The third metal is also found in the nitro-muriatic solution of platina: this metal possesses the singular property of forming an alloy with iron, which is not decomposable by nitric acid. By using this alloy with caustic potash and nitrate of potash, the iron is sufficiently separated to be taken up by nitric acid; the residuum after this separation is a dark green coloured powder, and is the oxide of the metal. When put upon a piece of platina and heated to whiteness, the powder is blackened but not reduced; but when exposed to the flame of the blowpipe, it becomes a metallic mass of considerable lustre. The metal thus obtained has the following properties: It is insoluble in nitro-muriatic acid, even when heated; when fused with caustic potash and nitre, it yields a brownish coloured mass, which softened by water deposits a gray powder still retaining some lustre; the alkali dissolves nothing, and the powder is merely the metal in a divided state, in which aqua-regia attacks it slowly, and converts it eventually into green oxide. By directing a current of hydrogen gas upon the heated oxide, combustion resembling that of gunpowder ensues, and a blackish powder is formed, which by the long reaction of the hydrogen is completely reduced. The metal thus reduced has a gray colour, nearly resembling recently formed spongy platina. When heated in contact with the air it becomes black, and continues so even at a white heat: it differs in this respect from rhodium, which is oxidated by heat, and at a higher temperature is again reduced.

Metal of Alumina.—M. Oersted is stated to have obtained the metal of alumina by employing the chloride of that earth. Pure alumina is heated to redness, and then intimately mixed with powdered charcoal: the mixture is introduced into a porcelain tube; and after heating to redness, dry chlorine gas is passed over it. The charcoal reduces the alumina, the metal combines with the chlorine, and oxide of carbonis also formed. The chloride of aluminum is soft, crystalline, and evaporates at a little above the temperature of boiling water; it readily attracts moisture from the air, and becomes hot when water is added to it. By mixing with an amalgam of potassium, containing much of the latter, and immediately heating the mixture, chloride of potassium is formed, and the metal of the alumina combines with the mercury. The amalgam quickly oxidizes by exposure to the air. Being subjected to distillation out of the contact of air, the mercury is volatilized, and a metallic button is left, which has the colour and splendour of tin. M. Oersted has ascertained many properties belonging to the new metal and its amalgam, which he promises to publish speedily.—*Ibid.*

Anatomical Plates.—The work of Antommarchi, the physician of Napoleon, consisting of anatomical plates of the human body, the size of the natural subject, has for some time been completed, and is the greatest, as well as the most complete undertaking of the kind

ever attempted. The entire number of plates and sketches is eighty-three; the cost about twenty guineas plain, and rather more than double that sum coloured, on vellum. There are among them eight full-length figures, exhibiting the several layers of structure, from the surface to the skeleton. There are likewise accurate representations of the viscera of the three great cavities, their nerves, blood-vessels, lymphatics, the organs of generation in both sexes, &c. &c. The first series is very minute, and displays the various tissues in an admirable manner.

A folio volume of description accompanies the plates.—*Lond. Med. Repos.*

Cotton of the Ancients.—The synonymy of the vegetables known to the ancients, is one of the most difficult points of science to establish, and is a continual subject of regret, especially when reference is made to vegetables, which have been extensively employed. M. Mongez has therefore rendered a service to science, by clearing up this part of the history of cotton, in a memoir lately published. Two very different vegetables have been confounded under the name of cotton, the *Bombax* and the *Gossypium* or cotton tree. It is the former of these that was designated by Herodotus, as well as by Strabo, who relates, that the Macedonians employed in Babylonia the down of the tree which bears wool to make housings for horses. Theophrastus speaks of both. The substance which Virgil mentions as fabricated by the *seres*, is the cotton which came from Bactria, called *serique*. The *Gossypium* was only cultivated in Egypt after the time of the Ptolemies; in the Western Morea, in the secondary century. Asia and Persia, among other countries, already possessed very celebrated manufactures of cotton. It was used as a substitute for papyrus, and the parchment which succeeded it, until it was itself replaced by paper made from flax and hemp. The word *cotton* evidently comes from *g'hotten*, by which the Arabians, who cultivated this vegetable before the commencement of our era, designated it, and from *Cottonara* (now *Canora*,) a country on the coast of Malabar, from which the Arabians and Egyptians carried it into their respective countries.—*Ed. New Phil. Jour.*

Common Sugar existing in the form of grains in the flowers of Rhododendron ponticum.—M. Jaeger discovered, in April 1825, on a plant of rhododendron ponticum, which he kept in his room, and which was covered with flowers, grains of common sugar, pure and of a white colour, on the inner surface of the upper division of the corolla. The quantity of grains collected from about 140 flowers amounted to 275 centigrammes. The mean weight of each grain was two centigrammes. The physical and chemical properties of these grains approach so much to those of common sugar, that no essential difference could be detected between the two substances.—*Ibid.*

Remarkable Hybrid.—"There is here at present an animal produced between a stag and a mare. The authorities of the place have attested the phenomenon. The appearance of the creature is very singular; the fore part is that of a horse, the hinder part that of a stag; but all the feet are like those of the latter animal. The same stag has covered another mare. The king has purchased the hybrid for the *Pfaueninsel*, where there is a menagerie."—*Extract of a Letter to M. de Ferussac, dated Berlin, 27th January*, 1827.—*Ibid.*

Vegetable Torpor observed in the Roots of the Black Mulberry-tree.—A very old mulberry-tree was broken into four quarters by the wind in 1790. Two of the quarters were destroyed, the other two remained growing for a few years, but the last of them was removed in 1802. An elder-tree grew in the place of the mulberry-tree, without doubt from berries which had fallen into the middle of the old trunk of the latter. This elder-tree died in 1826, and at the time of its languishing about a dozen of mulberry shoots started forth to the day. M. Dureau de la Malle ascertained that these did not spring from seeds, but from the roots of the old mulberry-tree, which had thus lain in the ground in an apparently inactive state, for 24 years, to send forth shoots at last.—*Ann. des Sciences Nat.* ix. 338.

Method of increasing the Odour of Roses.—For this purpose, according to the author of the method, a large onion is to be planted by the side of the rose tree, in such a manner that it shall touch the foot of the latter. The roses which will be produced will have an odour much stronger and more agreeable than such as have not been thus treated, and the water distilled from these roses is equally superior to that prepared by means of ordinary rose leaves.—*Œkonom. Neuigk.*;—*Bull. Univ.*

The Manna Gum Tree—Manna Eucalyptus.—The trees blossom from November till May. In those and the intermediate months, the manna falls, the weather being hot and dry. The quantity of manna depends upon the number of flowers which the trees and seasons produce, as the manna proceeds from the flowering-cups, which are full of honey. Those cups become the seed-vessels; they grow very thick on the tops of the branches, and form, with the cups, the distinguishing character of the genus, as named by the French botanists. The flowers are much thicker on this than they are on others of this genus that I have observed, which abound in New Holland.

The flowering-cups, or seed-vessels, being filled with the sweet juice, as the wind gently moves the branches, it falls on the leaves,—these congeal by the heat of the sun, and fall to the ground in white lumps, of various shapes and sizes. It sometimes falls so abundantly as

nearly to cover the ground under some of the trees. The ants devour it very fast, and they are always very numerous under the trees: probably it is to them a delicious food.

The manna gum tree is, when in full growth, and in rich alluvial soil, a very beautiful tree, affording, in the hot season, a very agreeable shade; it is of a large size, and I have seen it, when full grown, five feet in diameter at the but, and of considerable height. It sheds its outer bark, which peels off throughout the year. The bark is of a bluish white; the foliage of a very dark green, very thick and pendant on the tops of the branches. The wood of this species of eucalyptus is remarkable for its resistance to fire, probably from the saccharine nature of its sap; and, in a state of decay, it becomes arid.—(*Australian.*)

Swedenborg's Doctrine of Craniology.—The following observations, which we have accidentally met with in an old volume of the *Goetingische Taschenkalender*, will be considered by some, as another confirmation of the truth of the saying, that "there is nothing *new* under the sun." Without supposing that Dr. Gall borrowed any of his notions from the source here indicated, it is interesting to observe how similar were the views entertained by the Swedish theologian on the influence exercised by the different parts of the brain upon the form of the human skull.

Captain F. Walden published at Copenhagen, in 1806, a biography of the celebrated Swedenborg,* along with some extracts from his writings. It is very remarkable, as is shown by this work, that the distinguished Swede, about fifty years previous to Dr. Gall's theory, should have entertained a very similar opinion. The following are the words of Swedenborg:—

"Every man that is born has a disposition to all sorts of evil, which must be checked by education, and as far as possible, rooted out. This is first to be attempted by correction and punishment, then by good society and example, which lead to imitation, and at last good is secured upon a true and reasonable religious root. When these conditions are all observed, it is indicated by the beautiful skull of the individual. On the contrary, should the education be neglected, or no sudden misfortune nor opposition hinder the first outbreakings of evil or disorder, the evil afterwards becomes habit, aud produces peculiar wishes both in design and practice, which cause the formation of a badly shaped skull. The cause of the difference of skulls in such cases, is this: the peculiar distinctives of man, will and understanding, have their seats in the brain, which is excited by the fleeting desires of the will, and the ideas of the intellect. Near the various spots where these irritations produce their effects, this or that part of the brain is called into a greater or less degree of activity, and forms, along with itself, corresponding parts of the skull."

* The title of this interesting work is "Assessor Svedenborg's Levnet, Adskillige Udtog af sammes Skrivter nogle blandede Tanker, tilligemed Svedenborg's System i kort udfog. Kiobenhaven, 1806.

Urinary Concretion of unusual dimensions.—We have been favoured by Dr. John King, of Irvine, with the inspection of a urinary calculus of a very extraordinary size. Its weight, after being thoroughly exsiccated, was 13,000 grains, or 27 ounces 40 grains. Its length was 5.56 inches in one direction, its diameter was 3.37 inches, and in another direction 3 inches. Its longer circumference was 15 inches, in another direction 14.12 inches, and its transverse circumference was 10.37 inches. It was externally of a grayish white colour, and its surface slightly tuberculated.

The patient from whom this stone was taken after death, was from his infancy afflicted with severe pain in voiding his urine. The pain did not remarkably increase until about the fourteenth year of his age, when the symptoms becoming more severe, he had recourse to the usual palliatives, but found no permanent relief.

He continued his usual occupation, which was that of a carter, for the space of twenty-six years afterwards, never exempt from the most acute pain. In the earlier part of this period he was repeatedly advised by several medical gentlemen and Dr. King, to undergo an operation, but to which neither he nor his relations would consent.

During the last six years of his life he was unable to follow his ordinary occupation; and was confined to bed, and when, about four months before his death, Dr. King was again called in, he told him he was willing to submit to any thing that would tend to give him ease. But from the enlargement of the stone, which could be felt externally, Dr. King deemed an operation impracticable. On his death, Dr. King requested leave of his relatives to inspect the body, which was readily granted, as it had been his dying request. He found the inguinal glands diseased, and, on laying open the bladder, the stone above described. He died in the forty-sixth year of his age.—*Ed. Med. & Surg. Jour.*

Mr. Rumball on the Focus of Vision.—I affirm that "the images of objects are *not* inverted upon the retina, but that every image is painted there in a point;" in other words, "*the focus of the eye is upon, and not anterior to, the retina.*"

Exp. 1.—Dissect off the coats of the eye at the posterior extremity of its axis. Hold it up between the finger and thumb, and the vitreous humour will protrude. Look through the eye, and pass a probe or other object backwards and forwards before the pupil. *Its apparent motion will be the reverse of its real one.*

Exp. 2.—Cut away the protruding vitreous

humour. Now pass a probe up and down before the pupil; and, upon looking through the eye, the probe's real and apparent motion will be the same.

In the first experiment, the axis of the eye is slightly elongated; and, as the image of the probe is inverted, we have sufficient proof that the rays of light proceeding from it must have crossed each other, before their exit from the eye. *The focus is therefore within the axis.*

In the second experiment, the axis is shortened, and the real and apparent position of the object being the same, demonstrates that the rays have not crossed; consequently the focus of the eye is now without, or posterior to it. But, as the retina is situate between the point where the first experiment proves the rays to have crossed, and the point which the second experiment determines to be anterior to their crossing; and, as their extreme points approximate closely to each other, as in the first case the focus is within, and in the second without the axis, and as the retina is situate between them, I consider my proposition established, viz. "*that the focus of the eye is upon the retina.*"—*Phil. Mag.*

Decomposition of Sulphate of Copper, by Tartaric Acid.—M. Planche has observed, that when sulphate of copper is dissolved in wine vinegar, for the purpose of preparing a corrosive liquid to be applied to corns on the feet, that the tartaric acid present in the vinegar displaces the sulphuric acid from a part of the salt, and an insoluble acid tartrate of copper is produced.

Separation of Arsenic from Nickel or Cobalt.—The following process by M. Woehler seems among the best of those intended for freeing nickel or cobalt from arsenic in the dry way. It is founded upon the circumstances that many alloys, when heated with sulphuret of potash, become changed into a mixture of sulphurets, and that sulphuret of arsenic is very soluble in sulphuret of potash. One part of kupfernickle, fused and reduced to fine powder, is to be mixed with 3 parts of carbonate of potash, and 3 parts of sulphur, in a covered Hessian crucible. The heat is to be gradually raised to redness, and until the mass is just entering into fusion, and by no means so highly as to fuse the sulphuret of nickel which is formed. When cold, water is to be added, which will dissolve the sulphuret of potash, and leave a yellow crystalline powder, which is sulphuret of nickel, retaining, perhaps, a little copper or cobalt, but no arsenic, if the operation has been well performed. When, however, the object is to have the nickel perfectly pure, it should be fused a second time with sulphur and potash.

The method of freeing cobalt from arsenic, is the same as for nickel; but it is then necessary to perform the operation a second time. The cobalt (that of Tunaberg) has never been perfectly freed from arsenic by one operation, but has never retained any after the second.—*Archiv. für Bergbau*, 1826, p. 186.

New Alkali in Hemlock.—Professor Ficinus of Dresden, has discovered a new alkali in the *Æthusa Cynapium*, (*Linn.*) to which he has given the name of cynopia. It is crystallizable, and soluble in water and alcohol, but not in æther. The crystals are in the form of a rhombic prism, which is also that of the crystals of the sulphate.—*Repertoire di Chimie.*

Mosaic Printing.—Senfelder, the inventor of lithography, has discovered a new mode of printing from paintings, which has all the qualities of those executed in oil. He has termed it *Mosaic Printing*, and it is remarkable for its beauty, lightness, and durability.

Green Fire.—This is made of equal parts of pounded nitrate of barytes and charcoal, well mixed together. It is used in ghost scenes, and gives out a greenish flame with a white smoke, and makes the countenance assume a deadly hue.

Ancient Medical Literature.—A collection of the Greek writers was begun in Leipsic a few years ago, and has reached the 16th vol. A society in Paris has improved upon this example, by adding not only the Latin of the earlier and middle ages, and the Arabians, but also modern authors who have written in the Latin language. This collection will amount to 100 volumes.—*Foreign Quarterly Review, No.* 1.

Rewards for the Discovery of Quinia, and Lithotrity.—The Académie des Sciences has adjudged a prize of 10,000 francs to MM. Pelletier and Caventou, for their discovery and introduction into use of sulphate of quinia; and another prize of 10,000 francs to M. Civiale, for having been the first to practise lithotrity on the living body, and for having successfully operated by this method on a great number of persons afflicted with stone in the bladder.

Munificent Apothecary.—An apothecary of Tarentum, worthy of an age that we hope is reviving, died lately, possessed of a splendid picture gallery—containing specimens of Titian, Domenichino, Raphael, Giulio Romano, Michael Angelo, and other great masters. The produce of sale is expected to amount to nearly 200,000*l.* sterling.—*Furet de Londres.*

Prizes proposed by the Royal Academy of Sciences at Paris.—A general and comparative history of the circulation of the blood, in the four classes of vertebrated animals, before and after birth, and at different ages. The memoirs to be sent before the 1st of January 1829. The prize, a medal of the value of 3000 francs. A description, accompanied with

figures, sufficiently explanatory of the origin and distribution of the nerves in fishes. The prize is a gold medal, of the same value as the preceding. The memoirs to be sent before the first of January 1830, to the secretary of the institute.

New Publications.

The First Number (for November 1827, price 2*s.* 6*d.*, to be continued Monthly, and completed in twenty-eight Numbers) of the Flora Medica; containing Botanical Descriptions, Natural History, Chemical Properties and Uses, &c. &c.; the number of the different Species of the Officinal Plants, comprised in the latest editions of the London, Edinburgh, and Dublin Pharmacopœias; a list of the Indigenous Plants possessing Medicinal Properties, not included therein; a separate List of the Poisonous Plants; an Explanation of the Classes and Orders of the Sexual System of Linnæus, illustrated with Coloured Delineations; a copious List of Botanical Terms and Definitions; a Tabular Index, showing at one view the Generic and Specific Name of each Plant, the Class and Order to which it belongs in the Sexual System of Linnæus, the Natural Order of Linnæus and Jussieu, its Medicinal Properties, and the Volume and Page in which the Description is given. Edited by a Member of the London College of Physicians, F.L.S., and assisted by several Members of a Botanical Society. Callow and Wilson, London, 1827.

We heartily wish the Editor of this work success in his undertaking, for if we take this first number as a specimen of what is to come, his labours must be highly appreciated by the medical botanist. The Delineations are well finished for the nature and price of the work; and they are calculated to convey a very natural idea of the characters of the plants which they are intended to represent.

A Manual of Midwifery, for the Use of Young Practitioners of both Sexes. By William Maclure, Surgeon, Licentiate of the Faculty of Physicians and Surgeons, Glasgow, and Member of the Glasgow Faculty of Medicine. Underwoods. London, 1827.

This is a useful little work to young practitioners. Its only fault is that of being rather *too* concise.

L'Agent immediat du Movement vital devoilé dans sa nature et dans son mode d'action, chez les Vegetaux et chez les Animaux. Par M. H. Dutrochet, &c. &c. 8vo. pp. 226.

Pathological and Practical Researches on Diseases of the Brain and Spinal Cord. By John Abercrombie, M. D. Fellow of the Royal College of Physicians of Edinburgh, &c. 8vo. pp. 444. Edinburgh, 1827.

A Manual of Surgical Anatomy, containing a minute description of the Parts concerned in Operative Surgery, with the Anatomical Effects of Accidents, and Instructions for the Performance of Operations. By H. M. Edwards, D. M. P. Translated, with Notes, by Wm. Coulson, Demonstrator of Anatomy at the Medical School, Aldersgate street, &c. 12mo. pp. 427. London, 1828.

Observations on the Properties and Effects of the Expressed Oil of the Seed of Croton Tiglium; together with the Botanical History, and a correct coloured Engraving of the Plant. By John Frost, of Emanuel College, Cambridge, &c. &c. 8vo. stitched, pp. 40, with one Plate. London, 1827.

Observations on the Mortality and Physical Management of Children. By John Roberton, Member of the Royal College of Surgeons, Edinburgh; of the Literary and Philosophical Society of Manchester; and one of the Surgeons to the Manchester Lying-in Hospital. Longman and Co. London, 1827. pp. 311. 12mo.

Essai sur les Maladies de l'oreille Interne, ouvrage couronné par la Societé de Médécine de Bordeaux; par J. A. Saissy, docteur en Medecine, membre de plusieurs societés savantes, &c. un vol. 8vo. avec fig.

Works in Press.

Dr. Armstrong is preparing for the press, an octavo volume on the remote causes, prevention, nature, and treatment of Diseases of the Stomach, Liver, and Bowels. This work, which will appear in the spring, will be preceded by a series of coloured drawings, in 4to. with copious text, illustrative of the morbid anatomy of the stomach, liver, and bowels. They will be published in six monthly fasciculi, each containing about five plates, accurately coloured from nature.

Journal of Morbid Anatomy; or, Researches Physiological, Pathological, and Therapeutic. By J. R. Farre, M. D. The first number is in the press, and will be published early in 1828.

Mr. Frederick Salmon, Surgeon to the General Dispensary, and formerly House Surgeon to St. Bartholomew's Hospital, has in the Press a Practical treatise upon Stricture of the Rectum, illustrating by Cases the connection of that Disease with Affections of the Urinary Organs, the Uterus, and with Piles.

M. Dewhurst has in the Press Part II. of a "Dictionary of Anatomy and Physiology," also, Part I. of "Elements of Osteology," with lithographic drawings of the bones, taken from nature, the works of Albinus, Cheselden, and Cloquet, with an appendix describing the diseases of the bones, with the treatment, &c.; also notes of the Osteology of the higher orders of animals. It will be completed in six or seven monthly parts.

A. Grainger is about to publish the Elements of General Anatomy, in 1 vol. 8vo.

Mr. Litchfield, F. R S. Surgeon, has in the press a work entitled First Steps to the Study of the Healing Art.